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The Bradshaw Lecture
ON
CHOREA.

Delivered before the Royal College of Physicians of London on Nov. 4th, 1920,

BY SIR SAMUEL WALL, M.D. OXON., F.R.C.P. LOND.,
PHYSICIAN TO THE LONDON HOSPITAL AND TO THE HOSPITAL FOR CONSUMPTION, BROMPTON, S.W.

William Wood Bradshaw was educated at the Westminster and Middlesex Hospitals and became M.R.C.S. in 1833. He settled in practice at Andover and married the daughter of a rich jeweller. Soon after this he seems to have decided upon a course of post-graduate study, for in 1841 he obtained the licence of this College to practise medicine outside the London area, and in 1844 matriculated at New Inn Hall, Oxford, taking his M.A. degree in 1847. He was living in Reading in 1842, in which year he joined the Pathological Society of that town, and during the next few years he occasionally read papers at its meetings. He accumulated academic distinctions, and apparently devoted himself to reading and research rather than to practice, but the results of few of his researches were made public. He died in 1866 and his widow endowed this lectureship in his memory, probably in the hope of securing for the work of his successor the publicity which he failed to obtain for his own. Sir Rickman Godlee and Dr. Newton Pitt, in their Bradshaw Lectures, have collated and made public all that is known of the life of Dr. Bradshaw.

The ailment which we know to-day as chorea, chorea minor, Sydenham's chorea, or St. Vitus's dance, obtained a separate heading in the text-books of medicine in 1686, when Sydenham published in his "Schedula Monitoria" the first accurate clinical description[1] of a certain kind of convulsion, commonly called chorea Sancti Viti. Trousseau remarks that had Sydenham's knowledge of medical literature been larger he would have selected another title; this criticism is, perhaps, not quite fair. It would appear that the ailment had been recognised by others and was commonly called chorea Sancti Viti, but was confused with other convulsive disorders. Boerhaave, as late as 1722, did not distinguish between chorea and epilepsy. Sydenham's power of accurate clinical observation enabled him to point out the salient features of a certain kind of convulsion so clearly and unmistakably that his successors have gradually, though at times under protest, agreed to limit the use of the term to the ailment he described. This process of separating out the constituent elements from a large group of diseases is, of course, not uncommon in the history of medicine. Murchison in a similar manner separated typhoid from typhus; and in recent years bacteriologists have shown that even typhoid is not a single disease. We may not yet have reached finality in the case of chorea, which is probably a symptom group resulting from several different causes rather than a true morbid entity.

EARLY DEFINITIONS OF CHOREA.

Bernt, of Prague, in 1810 claimed that the disease was often recognised and graphically described from the earliest times in many countries[2]; he says that Hippocrates described a variety—scelotyrbe—when he said that in affections of the spinal cord there was "loss of function of the legs, bladder, and bowel, followed at times during convalescence by incontinence of urine and fæces." I have not been able to identify this quotation. Bernt next quotes Galen's definition of scelotyrbe as a "species of paralysis in which the patient staggers from side to side in walking, and has a steppage gait." In modern terminology the first would presumably be an example of transverse myelitis, the latter of peripheral neuritis, but neither would claim any kinship with what we call chorea. He goes on to describe as varieties of chorea, tarantism, epilepsy, the dancing epidemic of 1374—which led to the fame of the shrine of St. Vitus for miraculous cures and to the popular name of the disease—somnambulism, hydrophobia, mercurial tremors, and other conditions. He points out the difference in nomenclature employed by English and German doctors. "The English give the name of St. Vitus's dance to all convulsive, spasmodic affections of children involving one or other side, an arm or a leg, the muscles of the eyebrows and face, and scarcely seem to recognise the continuous spasmodic contraction of all the muscles not uncommonly seen in Germany." Other doctors, especially his German predecessors, wished to refer all forms of tremor, whether affecting part or whole of the body, to the category of spasmodic diseases, and reserve the term St. Vitus's dance to those who actually perform the dancing movements.

Boissier de Sauvages, in 1768, classifies scelotyrbe with rigors, eclampsia, epilepsy, hysteria, and beri-beri as a group of diseases characterised by general choreic spasms; scelotyrbe, he says, is a "semi-voluntary movement in walking, unilateral or general, mimicking the gesticulation or ludicrous antics of a stage clown."

Linnæus[3] (1763) defines hieranosus as a continuous painless, convulsive agitation of the body, with retention of consciousness. Chorea he describes as a continuous irregular shaking movement of the side. Vogel,[4] in 1784, adopts Linnæus's definition of hieranosus, and defines chorea as a dancing or running convulsion, of which tarantism is a species. Scelotyrbe for him is a violent chronic spastic contraction of the limbs.[5] Sagar, of Vienna (1776), states definitely[6] that Sydenham called chorea Sancti Viti, the disease which he terms scelotyrbe.

Cullen, in 1785, adopts Sydenham's description of chorea as a convulsive disease of adolescence, and gives scelotyrbe and hieranosus as synonyms.

And so the tale goes on. More than 100 years after Sydenham's description there was no general agreement as to the meaning of the term "chorea." The clinical genius of Sydenham had recognised the symptoms, but was unable to determine the ætiology or the pathology of the ailment. Little more was added to our knowledge of the disease until at the beginning of the nineteenth century some French physicians and some of the physicians at Guy's Hospital[7] began to note the association of rheumatism with cases presenting the clinical characters described by Sydenham.

RHEUMATISM AND CHOREA.

The rheumatic origin of Sydenham's chorea, though now almost universally accepted, is not proved, nor can it be proved before the ætiology of rheumatism itself is established. Bacteriologists are not yet unanimous in accepting as the causative agent the organism described by A. Paine and F. J. Poynton, and even if it be granted that their view is correct, we have not yet any method of proving the infection during life.

It is unfortunate that a disease so prevalent as rheumatism, so important from the point of view of public health because of its crippling after-effects, has not been investigated to the full. In England and Wales in 1917 105·6 per 1000 deaths from all causes were certified as due to organic disease of the heart, and a large proportion must have been due to the rheumatic poison. In the same period 86·4 per 1000 deaths were ascribed to pulmonary tuberculosis, 85 to bronchitis, and 82·5 to cancer. We have organised research upon tuberculosis and cancer and organic heart disease, but no attempt has yet been made toward coördinated investigation into the chief ætiological factor in the commonest cause of death.

We believe that rheumatism is the result of a specific infection, and from clinical observation many of us look with great favour upon the views of Paine and Poynton; but until the bacteriologists can provide indisputable proof and demonstrate in the individual case the presence of the exciting cause we must allow ourselves a loophole for escape in controversy. So soon as we can show when rheumatism is present we shall be able to demonstrate the connexion between rheumatism and chorea.

My own belief is that chorea is a symptom resulting from disordered function rather than a single disease; that in the great majority of cases this disorder of function is brought about by the rheumatic state, but

[1] Sydenham: Sch. Monit., i., 18.
[2] J. Bernt: Monographia Choreæ S. Viti, Prague, 1810.
[3] Cullen's Synopsis, p. 112.
[4] Ibid., p. 178.
[5] Ibid., p. 179.
[6] Ibid., p. 305.
[7] Bright: Medical Cases, vol. ii., p. 468; O. Sturge: On Chorea, ed. ii., p. 84.

that at times other causes may be operative. If this view is correct, we are justified in speaking (as did Leonard Guthrie) of "rheumatic chorea" as a disease,[8] but should use the term "chorea" to indicate a symptom group, qualifying it in each case by an adjective indicating the supposed ætiological factor.

ANALYSIS OF THE SYMPTOMS.

The pen pictures of chorea drawn by some of the medical masters of English style are worthy of any gallery, but as an oil painting has to yield place to a photograph for scientific accuracy, so these descriptions fail to give many of the details that are important in the intimate study of the ailment. The most perfect description I have read is that given by the facile pen of Sir Thomas Watson,[9] but even this will not serve completely the purpose I have in view—the analysis of the group of symptoms with a view to elucidation of the disordered function producing them.

Chorea, he says, is characterised "by an irregular and involuntary clonic contraction of some of the voluntary muscles, which, however, are not wholly or constantly withdrawn from the government of the will." ..... "There is no loss of consciousness; no defect of volition; the ordinary movements of the body can be performed in some degree, or sometimes under the direction of the will; but it would seem as if some other power wantonly interfered to excite them when they are not needed, to render them unsteady and imperfect, to arrest the natural action, and to give a new direction to the limbs and to cause the patients to gesticulate and grimace like a Merry Andrew. Moreover, these apparently absurd movements do not occur in paroxysms, but continue throughout the day, sometimes for weeks together, but they generally cease during sleep; for the most part, but not always, the agitated limbs are still while the senses are shut up in slumber. The complaint is not attended with fever." Later he adds: "The irregular jactitations are usually more marked and general on one side of the body than on the other; and sometimes they are confined to the muscles of one side."

"The persons who are subject to chorea are always inordinately sensitive and what is popularly called 'nervous.' They are easily stirred by new ideas and sudden feelings, and pass readily and upon slight occasion from one mood of mind to another." Thus skilfully he described what he saw, and avoided the common error of vision through the tinted spectacles of unproved hypothesis. We must, however, attempt a more detailed analysis of the symptoms, beginning with the movements, which in chorea are spontaneous, irregular, and large.

Character of the Movements.

Spontaneity.—They are spontaneous, occurring independently of the patient's will, though, as Watson says, "they are not wholly or constantly withdrawn from the government of the will." In fact, in the majority of cases the patient can by a strong voluntary effort check the movements to a considerable extent; this effort is usually associated with increase of the movements of those parts of the body to which the attention is not drawn. I prefer the term "spontaneous" to "involuntary," not because the latter is incorrect, but because the movements, though occurring independently of the will, are of the same type as movements executed as the result of volition. There is a similar, and perhaps stronger, objection to the use of the term "purposeless" in the description of the movements; and further, it must be admitted that many apparently voluntary movements are purposeless. Another point about these spontaneous movements of chorea, to which Watson does not draw attention, is that they are executed by muscles acting synergically and in sequence—that is to say, there is coördination.

C. E. Beevor [10] defined movement as the change in position of a joint brought about by muscular action. In movement the muscles concerned come into action in a definite order, the prime movers and the synergic muscles contracting each at the proper time. Such coördination between prime movers and synergic muscles may be demonstrated in cases of chorea, and proves—if proof be wanted—that chorea results from disordered function of the central nervous system.

Further evidence pointing in the same direction is to be found in the electromyographic records published last year by Stanley Cobb,[11] which showed that the action-current pictures for voluntary and choreic movements are essentially similar except for their duration. Weir Mitchell, in 1881,[12] and again in a joint paper with Wallace Rhein in 1898,[13] attempted to differentiate certain types of Chorea. In some cases the movements are checked by voluntary effort, in others they are exaggerated, in others unaffected, in others again they only appear during voluntary effort. J. W. Russell—not knowing at the time of Mitchell and Rhein's paper—wrote in 1899 [14] "that it is incorrect to say that purposive movement tends to make the chorea worse." He attempted to use the patient's handwriting as a test of the severity and progress of the disease, but found that the capacity to write bore no constant relation to the violence of the spontaneous movements; he points out that the ability to write at all depends ultimately on the power of more or less inhibiting the movements for a short time.

It seems to me to be somewhat doubtful whether all the cases described as chorea by Mitchell, Rhein, and Russell would now be classed as examples of Sydenham's chorea; in fact, Mitchell had doubts himself, and says that post-hemiplegic chorea at least should be excluded. However, they would probably have agreed with the statement that in chorea the movements are spontaneous, but not wholly or constantly withdrawn from the government of the will.

Irregularity.—The term "irregular" seems preferable to the word "clonic," which in its original sense probably referred to violent tumultuous motion, yet in recent times has been more often applied to repetitive movements as seen in the second stage of an epileptic fit, in hysteria, and in the familiar ankle phenomenon. The irregularity of the movements in chorea was clearly noticed by Sydenham and all subsequent writers upon the subject, and is a phenomenon which cannot be neglected in considering the pathology of the ailment. For instance, the so-called canine chorea, with its repetitive tremor, must be quite different from the condition we know as chorea.

Largeness.—A further characteristic of the movements is that for the most part they are large, involving the movements of joints through a considerable angle, and therein distinct from finer movements usually termed tremor; being large they are not executed with extreme rapidity, as in encephalitis myoclonica or Dubini's disease; occasionally, when the paralytic element is very marked, the movements may be very slight, but even in these cases the movements are not as fine as a tremor. At times these slight spontaneous movements are only seen after very careful watching, but when seen may be sufficient to establish the diagnosis of paralytic chorea from infantile paralysis or transverse myelitis.

For these reasons I think that we are justified in describing chorea as being characterised by spontaneous, irregular, large movements.

Symptoms Associated with Movement.

Muscular weakness.—Associated with the movements in practically every case, though varying in degree, is what Hughlings Jackson described as a thin-spread paralysis; the force of muscular contraction leading to a movement is not great, and if resistance is offered is easily checked. The difficulty in controlling the contortions of a choreic patient is not due to the violence of the muscular action, but to the irregularity and unexpectedness of the movements. In severe cases of paralytic chorea of Gowers or the chorea mollis of West the weakness is the most prominent feature, but even in quite mild cases it may be easily demonstrated. F. Warner has described the posture of the nervous hand as seen in chorea.[15] When the patient is told to hold out the hand the arm is extended, not in a horizontal line, but below it; the wrist droops, the metacarpo-phalangeal joints and the thumb joints are over-extended; if the patient, when standing, be observed from the side lordosis will be noticed, and in walking the eg most affected seems to drag behind. All these phenomena seem to result from loss of muscular tone. It is interesting to note that in cases of hemichorea the weakness is most marked on the affected side, and in other cases when, as is common, the movements are more marked on one side than the other the weakness is most pronounced on the side in which the movements are greater. This muscular weakness in chorea was noticed by the earlier writers on the subject, and may have led some of them to use the term scelotyrbe, or lameness, in preference to chorea.

Wasting.—Associated with the weakness there is almost always a loss of body-weight; the wasting is general and not confined to any particular group of muscles, or more marked in the part of the body particularly involved. This wasting may be partly due to the increased muscular exercise, but is, I think, chiefly brought about by the loss of fluid through the skin and consequent diminution in the volume of the blood. I do not know whether the volume of

[8] Guthrie: Trans. Med. Soc., 1901, vol. xxiv., p. 217.
[9] Lectures on Physic, 1843, vol. i., p. 643.
[10] Croonian Lecture, 1903, p. 74.
[11] Johns Hopkins Bulletin, vol. xxx., p. 35.
[12] Lectures on Nervous Diseases, 1881.
[13] Philad. M.S., vol. i., No. 4, p. 153.
[14] THE LANCET, 1899, i., p. 894.
[15] Lectures on Anatomy of Movement, p. 24.

the blood in chorea has ever been estimated by a method such as that of J. S. Haldane and Lorrain Smith, but should such an estimation be made I should expect the blood volume to be found below the normal. Many cases of chorea are associated with rheumatism; rheumatic patients are usually pale; choreic patients, on the other hand, even if there has been some other recent rheumatic manifestation, do not often show a similar pallor. Furthermore, the urine in chorea generally has a high specific gravity and is rather scanty; the patients like, and are much benefited by, plenty of fluid to drink. It is obvious that if fluid were withdrawn from the plasma at a greater rate than the red cells were destroyed there might be a considerable diminution in the total number of red cells without any apparent pallor. The condition would be the reverse of what Haldane and Lorrain Smith claimed to have proved in the case of chlorosis, where the total number of red cells may be actually increased, yet the greater increase in the volume of the plasma gives the patient the pale and puffy appearance which is so characteristic.

The wasting is not due to loss of appetite; choreic patients are usually very hungry; food may be refused at times because the patient has a painful dental ulcer of the tongue. Filing the sharp corner of the offending tooth soon restores the desire for food. Apart from this cause and the anorexia caused by injudicious treatment by arsenic or bromides, the appetite is almost invariably good. Dyspeptic symptoms also are, as a rule, conspicuous by their absence. It is often astonishing how much chocolate a choreic child can consume without subsequent retribution; except when large doses of arsenic or other drugs are the cause vomiting is extremely rare.

Distribution of movements.—The study of the distribution of the movements is of great importance in connexion with the pathology of chorea, and also of practical value in determining the severity of an attack. The more widely spread the movements the more serious the condition; neither the violence of the movements nor the loss of power to control them is as good a guide. Weir Mitchell attempted to differentiate types of chorea according to the effect of voluntary effort upon the movements; Russell attempted a somewhat similar classification by noting the effect on the handwriting, but the grading by such a method has not proved satisfactory. Gradation according to the extent is much more useful. At the onset and in mild cases throughout the duration of the ailment an arm or an arm and leg on the same side of the body may be affected: if two limbs only are choreic they are never on opposite sides of the body. Associated with these unilateral movements there may be some facial movements, though when the face is involved the affection is usually bilateral. In the next grade of severity the movements affect the limbs on both sides of the body: the face is then usually affected and there may be some spontaneous movements of the trunk. When the face and trunk are affected those movements are bilateral which in health are bilateral; for instance, the movements of frowning, elevating the eyebrows, retraction of the eyelids, moving the eyes, or the movements of respiration, whether costal or phrenic, if appearing spontaneously in chorea are symmetrical. I have never seen in a choreic patient the eyebrows elevated or depressed independently, the upper eyelid retracted on one side and not on the other, dissociation of the ocular movements or asymmetrical respiratory movements. Sir William Gowers[16] states that squinting and diplopia are not uncommon. I have not met with an example. In the most severe grade not only are the limbs, face, and trunk involved, but also the movements of deglutition and phonation. Difficulty in speaking and swallowing and the occurrence of gurgling sounds indicate very severe chorea. Though there is no sharp line of demarcation between these grades, yet they are of practical value in deciding treatment. Most of the cases belonging to the first two grades may often be satisfactorily treated in the out-patient department of a hospital, but when the third grade is reached and gurgling sounds are produced treatment in the home of a hospital patient becomes well-nigh impossible.

I am in the habit of subdividing the first two grades according to the power of controlling the movement by volitional effort: if the movements can be checked for 30 seconds in one outstretched hand the case is favourable, if in both outstretched hands it is better still, and if in both hands and the protruded tongue the chorea may be said to have disappeared.

Muscular movements remaining unaffected.—Muscular movements which in health are not under voluntary control are not affected in chorea; thus we do not find symptoms or signs suggesting chorea of the intestines, stomach, bladder, bronchi, heart, or blood-vessels, all of which are supplied with muscles under the control of the central nervous system, though not of the will. The sphincters are not affected in chorea, though there may be occasional involuntary evacuation of urine or fæces owing to the unexpectedness of the movements of the abdominal parietes. I have never seen any symptoms suggesting irregular convulsion of the bronchial muscles in chorea. The pulse is not infrequently irregular, but unless there is disease of the heart the irregularity consists of acceleration or retardation of the rhythm, and is obviously secondary to the irregularity of respiration. The pupils are often seen to oscillate, but the two oscillate synchronously, and there is no interference with the light reflex; the oscillation is almost certainly secondary to changes of blood pressure in the spiral vessels of the iris, and consequently is to be traced to the irregular respiration.

Cessation during sleep.—The cessation of the movements during sleep was noted by Sydenham and all subsequent observers; the influence of drugs in securing sleep is less well known. Sir Stephen Mackenzie pointed out to me some years ago that chloral, even in small doses, would secure sleep for a choreic patient, whereas opium and bromides, unless given in enormous doses, seemed to aggravate the condition. I have frequently found evidence of the truth of this statement, and can extend it by the observation that bromides combined with chloral seem to counteract its effect. The difference in pharmacological action of the drugs is obscure; clinically we notice that the sleep produced by chloral is much more natural than that produced by bromides, and that bromides dull reflex excitability much more markedly than chloral.

Mental state.—The mental state of the choreic patient has been described by many authors, and a diversity of statements have been made which are very difficult to reconcile with the facts to be observed at the bedside. I do not think that anyone will dispute the fact that choreic patients have very little control over the expression of the emotions—that, just as in an infant, tears or smiles may easily be evoked; they are extraordinarily responsive to their environment—easily frightened, easily pleased—with an uncanny instinct for estimating the anxiety of the doctor or nurse in attendance. In treatment this peculiar mental state should be remembered. I have seen cases of chorea, rendered maniacal by being nursed on the floor behind screens or in a padded room, who were quietened almost immediately by being transferred to an ordinary bed in the middle of a general ward where they could see their fellow human beings. It is years since I have allowed screens to be kept round the beds of any choreic patients in hospital, and I have never permitted any mechanical restraint, other than pinning the blankets over the bed with large safety-pins; I am confident that this is the reason for my having so little experience in maniacal chorea. Every ward sister or nurse with experience of the two methods of treatment has agreed with me when I asked her which seemed to be the more helpful. Emotional people are usually popular; those who have full control of their emotions are often called "cold," and are less generally welcome. Choreic parents, as a class, are the most popular patients admitted to a hospital ward. With regard to the intellectual faculties authors differ. That the power of attention is diminished is probable, if only because of the spontaneous movements and the general debility; that loss of memory or dullness is common I have not been able to satisfy myself. Most choreic children have done well at school and many are in a standard in advance of their years. In taking the history of a case in an out-patient department, as often as not more information can be got from the child than from the mother.

Chorea is occasionally met with in children showing stigmata of defective development, but this seems to me to be rare. Dullness may result from treatment by bromides or depressing drugs. Hallucinations, delusions, dementia, mania, melancholia, or suicidal impulses, described by some authors, seem to me to be exceptionally rare, and when present are more likely to be accidental associations than a true part of the chorea. The distinction between hysteria and chorea is difficult to define. It would appear that in chorea there is an inability to control the expression of the emotions by muscular movement, while in hysteria the emotional state finds expression in a great variety of phenomena in addition to muscular movement.

Age- and Sex-Incidence.

For any investigation into the pathology of chorea it is necessary to pay attention to the peculiar age-incidence of the ailment. All agree that it is almost absolutely confined to childhood and adolescence. My own statistics of first attacks show that out of 278 cases 245, or over 88 per cent., were between the ages of 5 and 15, and 274 between the ages of 4 and 20. The youngest was 4 and the oldest 26. Out of 726 cases from the London Hospital records, including first and subsequent attacks, 597, or 82 per cent., occurred between the ages of 5 and 15, and 704, or 96·9 per cent., between the ages of 4 and 20. These figures are in close agreement with other published statistics and do not require further emphasis.

[16] Gowers: Diseases of the Nervous System, vol. ii., p. 553.

The sex-incidence also requires explanation.

Gowers gave the proportion of three girls to one boy, Osler as two to one. In my statistics of 278 first attacks 197 were in females and 81 in males. On plotting on a chart the curves of the age-incidence of first attacks for the two sexes they keep approximately parallel: the great majority of first attacks occur between the ages of 5 and 15, the fastigium of the curve for each sex being between the ages of 7 and 14. For each year there are approximately twice as many girls as boys. After the age of 16 the patients are almost exclusively female, and after 17 a very high percentage of cases in women are associated with pregnancy. There does not seem to be any close connexion between the age or sex and the side first or most affected. Thus out of 99 cases the left side was most affected in 10 males and 37 females, the right side in 19 males and 33 females; the ages of the males with the left side most affected ranged from 6 to 15, the females from 7 to 23; when the right side was chiefly involved the ages of the males ranged from 7 to 24 and of the females from 6 to 27.

If a larger number of cases was investigated I think that any apparent difference would disappear.

PATHOLOGY AND ÆTIOLOGY OF CHOREA.

I have gone fully into the prominent features of chorea in order to show how far they help to elucidate the pathology and ætiology of the disease. The earliest speculations with regard to the nature of convulsive diseases, including chorea, are based on a humoral pathology. Bernt in his treatise[17] gives a résumé of the various views.

He describes how some supposed that nerves, like gut, contracted when they were moist and lengthened when they were dry, while others said that the nerves were hollow tubes, and that if there was any obstruction to the flow of blood through them they swelled and as a result were shortened. He tells how Stahl's pupils asserted that the immortal vital principle sedulously striving to maintain life and health endeavoured to attain this end by convulsive movements, erroneous perhaps, but not without some relation to reason. He says that there were still adherents of Boerhaave's view that convulsive diseases resulted from the inflow into the nerves and muscles of a violent or disordered nervous fluid or animal spirit. Bernt claims the greatest simplicity for his own view; he holds that the vital principle is the origin of all functions and movements of the living body, and that St. Vitus's dance results when that principle is affected contrary to the laws of life and health. He goes on to describe how this vital principle may be adversely affected, instancing, amongst other causes, malnutrition, loss of blood, and exanthematic disease. He argues against those of his contemporaries who looked upon chorea as a form of insanity, and localised the causative lesion in the brain on the ground that "anatomy proves that the brain controls the external senses, and through the sympathetic nerve the thoracic and abdominal viscera, while all other parts of the body—both for motion and sensation—are controlled by the spinal cord, which, like a second brain, sends to the aforesaid parts thirty pairs of nerves through the vertebral foramina."

It is curious that though Bernt published his views in 1810 Prochaska, whose "Animal Function" appeared in 1784, wrote the following[18]:—

> "It sometimes happens, however, that all these muscles (i.e., voluntary muscles) renounce the authority of the mind, and, while it is either unconscious or unwilling, are violently agitated by some preternatural mechanical stimulus, as is seen in hysterical, epileptic, or infantile convulsions, or in those affected with St. Vitus's dance; and these movements, although performed by muscles, designated 'voluntary,' can only be termed automatic. In the fœtus in utero and in the newly born these muscles are not moved voluntarily but for the most part automatically, for at that age the cerebrum is not as yet capable of thought, until, the organs of the faculty of thought being gradually evolved, the mind learns to think and to use the muscles subjected to its control."

As the humoral pathology passed away under the influence of the study of morbid anatomy the views as to the nature of chorea changed, and with the introduction by the physiologists of the experimental method of investigating the functions of the nervous system knowledge has been greatly extended, but they have not yet been able to elucidate the nature of chorea. Attempts to locate the primary seat of the disease by morbid anatomists have thus far failed. Gowers[19] stated that "the changes found after death afford no clear indication of the part primarily deranged. They have been found widely distributed—in the brain, spinal cord, and peripheral nerves—and are, moreover, inconstant." The judgment of to-day is unchanged. "The uncertain indications of pathological anatomy must be interpreted by the help of the symptoms themselves." This is my excuse for the exhaustive analysis of symptoms which I have attempted.

[17] Bernt: Monographia Choreæ S. Viti, p. 66.
[18] Prochaska: Syd. Soc. Trans. (p. 443), "Animal Functions," published 1784.
[19] Vol. ii., p. 568.

Chorea Viewed as a Condition of Reversion.

When any part of the body is affected by disease disturbance or loss of function may be expected; in the minor grades of such disturbance it may be easy to recognise reversion or regression to a functional capacity characteristic of an earlier phase of development. The healthy adult can digest food unsuited to the new-born infant, but the occurrence of disease may cause regression to the infantile state; in a similar manner we are in the habit of explaining the extensor plantar response, the tachypnœa of the pneumonic infant, and numerous other symptoms met with in disease.

I believe that Warner,[20] in 1887, in his lectures on the Anatomy of Movement, first definitely put forward the view that chorea is a condition of reversion, but the idea was evidently in Prochaska's mind when he wrote the words I have already quoted. Sturges, too, in 1877, wrote[21] that he considered chorea to be "an affection of childhood exhibiting in an exaggerated degree those characters of fidgetiness which belong to the child by nature." And again, that "chorea is an affection of function depending not upon anything that is added but upon something which is taken away."[22] Sturges believed that chorea was a mental affection;[23] that the control of the restlessness and instability which is the heritage of every child is mental, and that it grows and strengthens with the intellect; the loss of this control results in chorea. Chorea, he adds, is impossible in infancy. It is not quite clear, however, whether Sturges's conception of chorea attributes it to an increase or a diminution of the functional activity of the nervous centres. Gowers apparently thought that he meant the former; the above quotations suggest that he meant the latter. Sturges states emphatically his belief that morbid anatomy fails to account for chorea.[24] He regarded chorea as mainly a disorder of function, no doubt with some structural basis like all other movement, orderly or disorderly. Hughlings Jackson accepted W. S. Kirkes's embolic theory of the origin of chorea.[25] He believed that the direct pathological state leading to instability of grey matter producing choreal movements is increased quantity of blood in the periphery of the capillary district embolised.[26] W. H. Dickinson[27] thought that the pathological basis of chorea was "arterial hyperæmia and exudation, which produced points of irritation."

The underlying thought in all these explanations, and, in fact, in practically all the explanations yet offered, seems to be that chorea must result from increased nervous activity. The difficulty in accepting these views as they stand seems to me to be due to the fact that disease which persists for any length of time is more likely to be associated with impairment of functional activity than with its exaltation. It does not seem to me, however, to be impossible to reconcile the various views.

Prochaska pointed out in 1784 that in the fœtus in utero and in the newly-born the voluntary muscles are not moved voluntarily, but for the most part automatically, for the cerebrum is not as yet capable of thought; the organs of the faculty of thought being gradually evolved, the mind learns to think and to use the muscles subjected to its control. Warner in 1889[28] studied the spontaneous movements in infants by the graphic method, introducing the term "microkinesis." He found the movements to be almost constant and quite irregular, ceasing during sleep. Control of movement through the senses, for instance, turning the head toward a light, occurs at three months; inhibition of microkinesis by light and sound stimuli is found at four months, but control through the senses is not marked until the end of the third year, and microkinesis persists until the tenth year.

[20] Lectures, p. 93.
[21] Lectures on Chorea and Whooping Cough, p. 8.
[22] Ibid., p. 84.
[23] Ibid., p. 93.
[24] "Chorea," ed. ii., p. 115.
[25] Med. Chir. Trans., vol. xxxv., p. 281.
[26] Brit. Med. Jour., Dec. 23rd, 1876, p. 813.
[27] Med. Chir. Trans., vol. lix., p. 15.
[28] Journ. of Mental Science, October, 1889.

Control of Movement by the Child.

The study of the development of the control of movement by the child's brain has not yet engaged the attention of many physiologists. W. M. Feldman, in his "Child Physiology," has given a résumé of the scanty literature.[29]

He quotes Partridge's statement that the lack of proper inhibitory control, which is a marked characteristic of childhood, is due to incomplete development of the inhibitory centres. Partridge found that boys learnt to inhibit the fear reflex in the eye at an earlier age than girls.[30] Hancock,[31] also quoted by Feldman, studied the development of control of movement by instrumental methods. He found that involuntary swaying of the body became much less marked between the ages of 5 and 7, but throughout childhood was more marked than in adult life; there was also a marked gain in the steadiness of the hand between the ages of 5 and 7; up to the age of 5 children could not keep their index fingers still for 30 seconds. Amongst other conclusions Hancock claims to have established that children in normal healthy growth show a lack of coördination and control; that before puberty girls are steadier than boys, and that the left hand is less steady than the right.[32]

Clinical observation supplies further evidence, if further evidence be wanted, that movements which at first appear to be spontaneous and independent of volition are gradually brought under the control of the will. The movements of the fœtus in utero and of the newly-born infant are not voluntary; tradition says that they begin earlier, and are more active in boys than in giris. The first apparently voluntary act of the new-born child is usually the attempt to raise the head from the pillow during the second or third month; the next, the movement of the hands towards an object during the third month; sitting, standing, walking, speaking, writing, modelling, sewing, playing musical instruments, and other voluntary actions develop under the increasing control of the developing nervous system. Whether the microkinesis, or involuntary movement, is developed from reflex action, or from a fundamental rhythmic function of nervous protoplasm, does not concern our present argument.

All that is necessary to establish is that during childhood and adolescence movements which at first are spontaneous and irregular are gradually brought under the control of the will; impairment or removal of such control would lead to the reappearance of such spontaneous irregular movements; this may be the explanation of chorea. It is unnecessary to point out that the movements of the young infant in some respects differ from those of chorea; while that part of the nervous system which is concerned with the control of the movements is developing the rest is undergoing modification. As Warner[33] puts it, "the child can never again become an infant, but it may become infant-like."

Ætiology.

What appear to me to be the essential characters of choreic movement, spontaneity, irregularity, and largeness, are also essential characters of the microkinesis of infants. The expression of the emotions by muscular movements develops under the tutelage of the senses, while the will is gaining the power to inhibit such expression. The choreic child has diminished control over the expression of the emotions, just as he seems to have diminished control of the microkinesis; the control, however, as has been pointed out repeatedly, is seldom completely lost; as a rule, by a violent effort of the will, some measure of control can be imposed.

If it be granted that chorea results from the impairment or loss of function of some part of the nervous system the next step in our investigation is the attempt to locate the part chiefly concerned. The findings of the morbid anatomists are too inconstant to afford us much help in our search. The study of symptoms must again be our chief guide. The earliest investigators thought that the structural basis for chorea was to be found in the spinal cord. The type and distribution of the movements, apart from all other considerations, sufficiently disprove this view which, so far as I know, is not now entertained by anyone. Watson, following the earlier French physiologists, was inclined to locate the primary site of the disease in the cerebellum.

The study of chorea does not in the present state of our knowledge suggest that it is due primarily to disturbed function of that organ. As I have already shown, there is no real loss of the power of coördination, no disturbance of the sensory side of the equilibrating mechanism, and a lesion of the cerebellum would not explain the loss of emotional control so characteristic of chorea. The opinion of all modern investigators ascribes the ailment to a disturbance of the functions of the cerebrum.

Russell Reynolds, Hughlings Jackson, and H. C. Bastian were all inclined to attribute chorea to disturbed nutrition of the corpora striata and adjoining parts of the brain. S. A. K. Wilson[34] more recently described the syndrome of the corpus striatum as consisting of involuntary movements, bilateral tremor of the upper and lower extremities, and occasionally of the head and neck, the movements being usually rhythmical but occasionally irregular and increased on volitional movement; associated with the movements there is spasticity of the limbs and face. This condition was described by Gowers as tetanoid chorea. Wilson says later that the anatomical area in association with lesions of which involuntary movements occur is more or less definitely limited to the basal ganglia, superior cerebellar peduncles, and possibly cerebellar nuclei and the mid-brain. He supposes that the corpus striatum exercises a steadying effect upon the action of the cortico-spinal system.[35] Stanley Cobb[36] thinks that in chorea this steadying influence is lost, and with it the ability to maintain a steady contraction. Gowers[37] was of the opinion that the primary seat of the disease was in the cortex, and most subsequent writers upon the subject have agreed with him. Hughlings Jackson remarked that to locate the damage that destroys speech and to locate speech are two different things.[38] The problem in chorea is more difficult than in speech; we cannot even locate by anatomical methods any damage that leads to chorea.

The most we can do is to offer the surmise that if there be an anatomical basis for chorea, as the positive symptoms result from the released activity of lower centres, the lesion must be at a high level. Functional and structural development probably keep pace together, and it is known that the structural development of the cortex covers about the same period as that of the function the abolition of which appears to be responsible for chorea.

The study of the symptoms seems to confirm this conclusion; the movements are of the type which we should expect to occur when the lower centres were released from the inhibitory control of the highest and most recently developed part of the brain. Moreover, by extraordinary effort the choreic patient can to some extent inhibit the movements. The tendency to unilateral distribution may be the result of inequality in the rate of development of the functions of the two sides of the cortex: movements bilateral in the healthy state are not affected unilaterally in chorea, and those which are never brought under voluntary control are not involved. When the whole nervous system is quiet, as in sleep or under the influence of chloral, choreic movement ceases. With the withdrawal of the control of spontaneous muscular movement there is a withdrawal of the control of the emotions. Chorea does not occur until the cortex begins to develop its power of control, and becomes extremely rare when the structural and functional development is complete. If this view of chorea is correct we must look upon it not as a morbid entity but as a symptom group which develops when the controlling influence of certain cerebral centres is impaired or lost. The ætiology on the hypothesis is not likely to be single.

Rheumatism may be admitted at once as one of the chief factors in the production of chorea. The researches of F. J. Poynton and Gordon Holmes[39] show how cerebral rheumatism may produce rheumatic chorea, either by the direct invasion of the cerebrum by the rheumatic organism or by a soluble toxin in the blood.

[29] W. M. Feldman: Child Physiology, 1920, p. 559.
[30] Amer. Jour. Psych., 1900, p. 21.
[31] Pedagogical Seminary, vol iii., 1894 (quoted by Stanley Hall).
[32] Cf. Stanley Hall: Adolescence, vol. i., p. 145.
[33] Lectures on Anatomy of Movement, p. 93.
[34] Brain, vol. xxxiv., p. 466.
[35] Ibid., p. 488.
[36] Johns Hopkins Bulletin, vol. xxx., p. 35.
[37] Vol. ii., p. 570.
[38] Cf. Brain, vol. xxxviii., p. 81.
[39] THE LANCET, 1906, ii., 982.

Their chief argument against the toxæmic theory is that it is difficult to attribute an affection which may be unilateral to a general infection. I have attempted to show that owing to the unequal rate of development of the two sides of the brain unilateral incidence might be expected.[40] Poynton and Holmes were inclined to consider hemichorea as a result of a localised infection, but the cases investigated by them showed a generalised infection through the parts of the nervous system examined. My own view is that hemichorea could be equally well explained as the result of a general infection of the nervous system and of a general toxæmia, but their observations incline me strongly to the belief that infection plays the chief part.

If capillary embolism, or thrombosis, is ever the structural basis of chorea the explanation must be that the lesion has impaired the function of the mechanism of control. The infrequency of any pronounced permanent effects after recovery from chorea seems to argue against the view that vascular changes often take part in its production.

Importance of Fright.

Sturges looked on chorea as a disturbance of function without any gross structural change in the nervous system, and attributes to fright great importance as an ætiological factor. In 268 cases in which inquiry was made a history of fright was obtained in 66, but even this number included many in which there was great doubt as to cause and effect. Thus one child is said to have been frightened by a frog; another is said to have been wakened at night by a man shouting in the street and to have developed movement seven days later; another is said to have developed chorea because he was caned at school for fidgeting. To get 66 histories of fright out of 268 cases, such examples as these have to be included. Most children are frightened occasionally, and by the law of chance choreic children would not always escape. Fright undoubtedly exaggerates choreic movement, and consequently may at times be considered its cause without adequate reason.

To give an example of the extreme difficulty which may arise in estimating the relation of fright to chorea:

A girl, aged 11, who had previously been quite well, was chased by a goat; typical chorea, involving all limbs and the face, developed immediately, and she was admitted to hospital; a few days later she developed arthritis of the right elbow with pyrexia and evidence of mitral incompetence; she recovered after three months' treatment, but was readmitted to hospital one month after discharge with a relapse, this time without any history of fright.

Fright, or anxiety, is more easily connected with the development of chorea in older patients, especially those who have had previous attacks.

Thus a girl of 27, who had had two previous attacks of chorea, saw her step-father try to cut his throat; movements developed seven days later, but disappeared after a fortnight in hospital.

The chorea of pregnancy[41] is often determined by anxiety, and the best proof of this is that the onset is commonly associated with quickening. Though fright or anxiety may often exaggerate chorea and cause a relapse in those previously attacked, yet I have not found it at all frequently as an important ætiological factor. The same may be said of overpressure at school, which is not infrequently accused of causing chorea. It is not good for a choreic child to attend school, but it is very difficult to get evidence that schooling is really responsible for making a healthy child choreic. Rheumatism appears to be by far the commonest cause of chorea, but it is not the only cause. Recently I have had under my care two patients with irregular spontaneous movements indistinguishable from those of rheumatic chorea, but developing other symptoms in the course of the disease which seemed to make it quite certain that they were suffering from lethargic or focal encephalitis.

If the views which I have urged with regard to the cause of chorea are correct we should, in diagnosing chorea, indicate by an adjective the supposed ætiology of the attack.

[40] Cf. Stanley Hall: Adolescence, vol. i., p. 149.

[41] Cf. Wall and Andrews: Jour. of Obstetrics and Gynæcology, June, 1903.

ACUTE RHEUMATISM IN CHILDREN

UNDER TWELVE YEARS OF AGE.[1]

BY F. J. POYNTON, F.R.C.P., M.D. LOND.;
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IN this paper we record the results of a study at the Hospital for Sick Children, Great Ormond-street, of a severe outbreak of acute rheumatism in children under 12 years of age, which occurred between July, 1919, and June, 1920. Although we need only mention such eminent names as those of the late Dr. W. B. Cheadle, Sir Thomas Barlow, Sir Dyce Duckworth, and the late Dr. D. B. Lees to dispose of any idea that we are breaking new ground on this subject, we believe that by insisting on the gravity of this disease, and by indicating this gravity in definite terms, we shall do some service to the medical profession in this country. Such an attempt will be useful as a nucleus for a wider study of the disease, which we can hardly doubt will eventually be undertaken, for not only is rheumatism very rife in this country, but it offers the best opportunities we at present possess for the practical advancement of the treatment of heart disease.

We are not concerned here with the pathology or the treatment of rheumatism, and do not intend to enter upon the vexed questions that present themselves in a complete study of the disease. Our intention is to present the facts which this outbreak has provided—facts which we have collected during 12 months from the in-patient cases. The collection was a laborious undertaking, although the actual results have been comparatively small. Moreover, our research had obvious limitations, for during the year there must have been a considerable number of cases which, from lack of bed space, had to be treated in the out-patients or at home. Again, the age-limit of 12 years is an arbitrary one, determined by the hospital regulations. This, however, can be confidently stated: that the injuries done by this outbreak were sustained by those who had not even commenced the real struggle for existence.

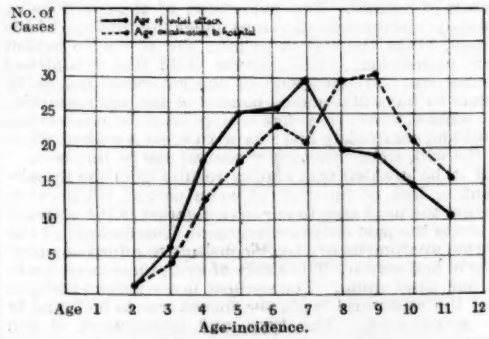
Details of the Research.

Number of cases.—The total number of cases in the 12 months from July, 1919, to June, 1920, was 172; of these 84 were first attacks.

Sex-incidence.—A hundred and four were females and 68 were males, a proportion of about 3 to 2.

Locality.—Eighty cases came from North London, 47 from East London, 23 from West and South-West London, and 22 from outside the London area. The majority of all our cases came from North and North-East London.

1



Age-incidence.—We show two tracings on our chart (see Chart 1) to illustrate this point. The continuous

[1] A paper read at the Medical Society of London on Nov. 22nd, 1920.

line shows the ages of all the cases at the time of their first attack of rheumatism; the interrupted line shows the ages on admission of all the cases during the 12 months. The former indicates a rapid rise in the age-incidence from 2 to 7 years, when the maximum of 31 cases is reached; then follows a steady fall to the twelfth year. The latter indicates that the maximum, again 31, has now moved from the seventh to the ninth year; this move is clearly explained by the fact that among the children admitted during the 12 months there were many recurrent attacks. This is a point of importance in the history of the disease.

Heredity.—The hereditary tendency cannot be so accurately determined in a series of hospital cases as in a series of private cases, such as was published by Dr. Cheadle, who found a family history in 58 per cent. of 180 patients. In our series the percentage was 40.

Seasonal incidence.—This was calculated from the earliest dates of the symptoms of the illnesses. In both first attacks and recurrent attacks the maximum was reached in December, 1919, and the minimum in March, 1920. November and December, 1919, were both bad months, and April, 1920, shows an outbreak of first attacks. On reference to the official meteorological reports we found that November was exceedingly cold, with frequent snow and hail, and that all December was rainy. Again, March, 1920, was exceedingly mild (the incidence of rheumatism at its minimum), but April was throughout wet and unsettled.

Results of the outbreak.—The result on leaving the hospital was as follows: Deaths, 15; chronic invalids, 17; cases of compensated heart disease, 70; recoveries, 70. Examination of these patients three months later in September, 1920, showed that the death-rate had risen to 22, the number of chronic invalids to 30, while cases of compensated heart disease had fallen to 58 and recoveries to 62. Thus in this outbreak nearly 13 per cent. died and over 17 per cent. became complete invalids.

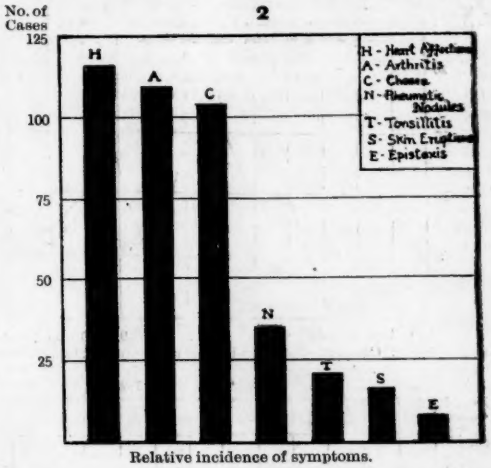
Analysis of the 84 first attacks.—An analysis of the 84 first attacks will serve to introduce the various rheumatic manifestations of which heart disease, chorea, and arthritis are the outstanding examples, and lead us to the wider question of the details in the total number, 172. Of these 84 cases, 33 came under notice for chorea, 9 for arthritis, 5 for primary cardiac disease, and 37 for multiple manifestations. Thus it is apparent that the most frequent solitary manifestation of rheumatism is chorea, a point to which we shall allude again later. Twelve of these cases died.

The economic question.—We turn aside here for a moment to the economic side of the subject. Our medical beds in the hospital are 100 in number, and throughout the year are, as a rule, fully occupied. The average stay of each medical case in hospital is 28 days. Now if the 172 cases of rheumatism be looked upon as one case, occupying one bed in the hospital, that bed was monopolised for 10,252 days, which means that it was monopolised for from 28 to 29 years, or, to put it in another way, all the medical beds were occupied for 15 weeks. The cost of each child per week is almost exactly £2 9*s.*, and thus in mere money the outbreak cost the hospital £4589. Further, the average stay of these cases was 60 days, as against the average of 28 days for all medical cases. How much the efficiency of the hospital as an institution for acute diseases was hampered is evident when we point out that these cases occupied beds for more than twice the average time they would have been occupied by an equal number of cases of all kinds, including rheumatic. When we recall that at least 13 per cent. of these cases died, 17 per cent. were permanent invalids, and nearly 30 per cent. had organic heart disease, we realise how serious a disease rheumatism in childhood is in this country.

Analysis of the 172 Cases of Rheumatism.

A.—*Chorea.*

1. *A rheumatic lesion: lesson of the air raids.*—We must now consider the manifestations in the grand total of 172 cases. The first we take is chorea, because it opens up some interesting questions in rheumatism. Our view upon chorea is that, although not certainly always rheumatic in origin, it is best to consider every case as of this origin unless there is convincing evidence to the contrary. It was present in 104 cases—that is, 60 per cent. (Chart 2.) We believe that the majority



Relative incidence of symptoms.

of physicians in this country agree in considering rheumatism to be the outstanding cause, and in our opinion the vast experiment of the air raids conclusively proved that fright, although a factor, is not the cause of chorea. In illustration of this we give the following figures showing the number of cases of chorea admitted to the hospital over a period of four years; one year was pre-war, another when the air raids were at their worst, the third coincided with the termination of the war, and the last is the 12 months we are considering in this paper. July, 1913, to June, 1914, 77 cases of chorea in 1147 medical admissions; January to December, 1917, 63 cases of chorea in 1086 admissions; July, 1918, to June, 1919, 65 cases in 978 admissions; July, 1919, to June, 1920, 104 cases in 1292 admissions.

2. *Analysis of 104 cases.*—It was noted that in 37 out of the 104 cases of chorea there was no evidence of rheumatism forthcoming. Six of these cases, however, gave a family history of rheumatism, and 11 at an earlier date had suffered from tonsillitis to the extent that removal of the tonsils had been undertaken. When we bear in mind the association of tonsillitis and rheumatism, the fact that 11 of these should have been operated upon for enucleation is interesting. Nevertheless, we are prepared to accept the criticism that we have regarded 37 out of the 104 cases of chorea as rheumatic without any definite evidence and justification. On the other hand, we can put forward from our series 12 examples of acute rheumatism in which chorea was the first and only manifestation, but which subsequently developed heart disease and arthritis. Clearly, then, because chorea occurs as a solitary symptom we cannot exclude the likelihood of its being the solitary symptom of rheumatism. Others have pointed this out, and we only dwell on it here because we have some actual figures and can give two striking examples: one a child who had five attacks of chorea and then died of carditis, and another who had four attacks of chorea and then developed acute endocarditis in an attack of acute rheumatism.

Sixty-seven cases remain over and above the 37 we have just considered, and all of these showed other rheumatic manifestations in addition to chorea. Thirty had heart disease, 18 arthritis, 12 both arthritis and endocarditis; 5 more had in addition nodules, 1 had erythema, and 1 acute tonsillitis. If 37 were examples of chorea only, 67 were examples of chorea and rheumatism, and this series affords further strong evidence in support of the rheumatic origin of chorea.

It is interesting to find that the age-incidence of these cases of chorea shows a maximum at 7 years, that

corresponding precisely with the maximum age-incidence of all cases of rheumatism. (See Chart 3.) Similarly, the seasonal incidence shows the same maximum in December, the same minimum in March, and the same

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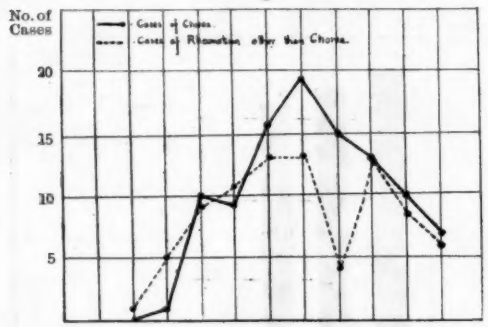

Age-incidence. Cases of chorea and rheumatism other than chorea.

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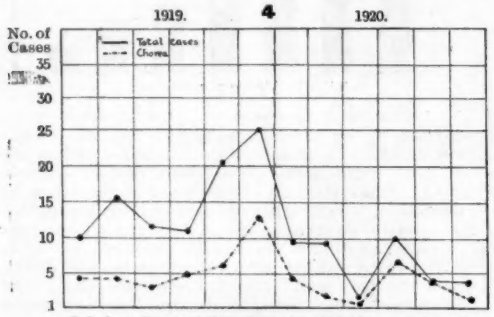

Seasonal incidence. Total cases and cases of chorea.

exacerbation in April. (See Chart 4.) There seems to be no apparent reason why fright should reach its maximum at 7 years and be much more frequent in December than in March.

3. *Frequency as a solitary rheumatic sign.*—There seems little doubt that of the three great manifestations chorea is the most frequent solitary lesion. This is clearly shown in the 84 first attacks of rheumatism, for whereas chorea was solitary in 33 cases heart disease and arthritis were solitary in 5 and 10 cases respectively. Now of all the manifestations chorea is the most likely to attract attention, and the question arises whether the greater frequency of rheumatism in girls is as real an event as figures seem to show. Is it not possible that the lesser frequency of chorea in males leads to the overlooking of early cases of rheumatism in this sex, slight heart disease and transient pains being missed by the parents and their real significance not understood? The greater frequency of chorea in girls, which is unassailable and in our series was as three to one, must, we think, depend upon their more unstable nervous system, although we mention the latter with bated breath.

4. *Two types of rheumatic attacks in childhood.*—One result of the study of chorea is to lead to the recognition of two main groups of rheumatic conditions in the young. One is represented by tonsillitis, arthritis, and morbus cordis, which is more fatal; the other by chorea and endocarditis, which is more chronic and a frequent precursor of mitral stenosis.

5. *Frequency of chorea in London.*—The last point of interest concerned with chorea is this, that we found no less than 104 cases of chorea in 172 cases of rheumatism taken from the in-patients only of one hospital. It would be interesting to know the number of cases of chorea that occur in London in one year. There must be very many, and we ought to ask ourselves why. Can it be that our educational system lacks some saving grace of humanity? We realise that in using such an old-fashioned term as this we are likely to arouse the laughter of the modern intensive school of thought, but despite that fact we feel there may be some value in raising this question.

B.—*Morbus Cordis.*

We come now to the most important manifestation, heart disease. Here we must admit there may be differences of opinion as to the earliest evidence of cardiac disturbances, and in some cases the onset is so insidious that it escapes notice at the time of the illness. The lesion may not become apparent until after the child has left the hospital, as our review of these cases in September, 1920, showed. We have, then, in their analysis dealt only with definite and clearly noted disturbances.

1. *Analysis.*—In 172 cases 114, or 66 per cent., showed some lesion: 19 had general carditis; 63 had mitral lesions, of which 22 showed definite signs of mitral stenosis; 14 had aortic and mitral disease; 15 a transient dilatation; and 3 a persistently rapid action.

2. *Results on re-examination.*—At the end of September we re-examined or obtained information about all cases that had left the hospital, and we found that 7 deaths had occurred during the interval, that 14 had become total invalids, and 12 more had lost ground from failure in good compensation. The 22 deaths in this outbreak of rheumatism were with one exception due to carditis. The exception was death from vomiting, acetonæmia, and collapse, apparently the result of pushing salicylate of soda. We lay stress on the fact that a heart affection was the most frequent event in this outbreak (see Chart 2), for it has been stated that the heart disease of rheumatism is associated with and not caused by the disease. If this is the case, then surely still more must all the other manifestations be considered in this light, for they are less frequent. If, however, we take away all the manifestations as being associated with and not caused by the disease, what is rheumatism?

C.—*Arthritis.*

Under the heading of arthritis the first point we lay stress on is the impossibility of drawing any distinction between the cases of arthritis and those with arthritic and muscular pains. It is not infrequent for a child to suffer acute pains in a joint that shows no visible changes, and such a joint may be more painful than one visibly inflamed. The total number of cases was 111, or 65 per cent. Thus, though clinically a manifestation of little gravity, it is a valuable indication of the disease, and we found that the fatal cases of rheumatism most frequently commenced with an acute arthritis, rapidly followed by carditis. In particular we would lay stress on the association of severe stiff neck with serious heart disease.

D.—*Angina Faucium.*

1. *Analysis.*—In 172 cases of rheumatism there were 22 examples of rheumatism following immediately on an attack of tonsillitis, 38 with enlarged and unhealthy tonsils, and 17 in whom the tonsils and adenoids had been previously removed. This is in great contrast to the evidence in favour of any abdominal affection as an antecedent to an attack of rheumatism, for there was not a single example of this occurrence. We venture to think that in so far as children's rheumatism is concerned, the idea that it is an infection from the bowel is an hypothesis unsupported by clinical evidence.

2. *Rheumatism and tonsillitis.*—We believe the throat to be a path of entry of the infection for these reasons: (1) Acute tonsillitis may be followed at once by severe and even fatal rheumatism; (2) guillotining of the tonsils when acutely inflamed may be followed at once by an attack of rheumatism; (3) unhealthy conditions of the throat are very frequent in the rheumatic child. This leads us to speak of the enucleation of the tonsils in the rheumatic. This, though a valuable operation in many cases, does not, however, prevent further attacks, upon which point we have valuable facts. In this series there were 17 examples of rheumatism occurring after enucleation, the operations varying in time from

just before an attack to five years previously. One of these children died of carditis six months after the operation. Two suffered from carditis, the operations having been done four years and one year respectively before the illnesses. Three developed chorea and heart disease, and 13 chorea. These figures, though few, must warn us that although enucleation is a preventive measure of importance, it is not a panacea for rheumatism.

E.—*Nodules.*

The older clinicians gave us very clear teaching on the grave meaning of subcutaneous nodules. This series will give strong support to this teaching, which shows some tendency to be forgotten. No doubt nodules can occur in cases which run a benign course and even in cases free from heart disease, but this does not in any way affect the general truth that their appearance is a very grave event. There were 33 examples in this series, of which 12 cases, or 37 per cent., were fatal, 15, or 47 per cent., had severe heart disease and became invalids, 4 had heart disease which later compensated, and 2 were free from heart disease.

F.—*Cutaneous Manifestations.*

These were 17 in number, 10 being examples of erythema and 7 of purpura; finally there were 6 cases of epistaxis, 2 of which were severe.

G.—*The Fatal Cases.*

The fatal cases illustrate the fact that though less frequent, rheumatism is, as a rule, more fatal in the male. In 172 cases of rheumatism 68 were males and 12, or 18 per cent., died. 104 were females and 10, or 10 per cent., died. Of the 12 cases fatal in the first attack of rheumatism 10 were boys.

1. *Absence of fever in virulent cases.*—The absence of fever in virulent cases in this outbreak was a very remarkable feature. (See Chart 5). Some cases were

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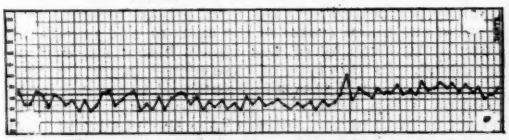


Case of rheumatic carditis with nodules, resulting in death.

characterised throughout by their steady progress to a fatal end and by their entire failure to react to any form of treatment.

2. *Remarkable taciturnity.*—Another interesting feature was the taciturnity of virulent cases. These children lay for weeks without speaking to doctors, nurses, or other children, and there is no doubt that this extreme taciturnity is a grave sign of a virulent affection of the heart.

Conclusion.

In conclusion, it appears that this analysis proves beyond dispute the extreme gravity of rheumatism in children of the class that are treated in hospitals—a fact all the more striking when we realise how comparatively infrequent such cases are in the children of the more fortunate. For those of us who are acquainted with the work done by the New York Association for the Prevention and Relief of Heart Disease, the absence of organised effort in this country for control of rheumatism and its heart disease is a matter of profound regret. Fortunately, it is never too late to mend.

It would have been impossible for us to have undertaken this research had we not received the ready assent of the three other physicians to the hospital to utilise the cases under their care. We owe our grateful thanks to Dr. G. F. Still, Dr. R. Hutchison, and Dr. J. H. Thursfield for such permission.

MANCHESTER RADIUM INSTITUTE.—In response to the recently issued appeal for £30,000 over £6000 have already been received. Lord Doverdale subscribed £3000, Sir William Milligan £1000, two city firms £250 each, and several other firms £100 each.

SENECIO POISONING.

BY ARTHUR R. CUSHNY, M.D. ABERD., F.R.S.,
PROFESSOR OF MATERIA MEDICA AND PHARMACOLOGY, UNIVERSITY OF EDINBURGH;
AND
HENRY E. WATT, D.SC., F.I.C.
(From the Materia Medica Department, University of Edinburgh.)

THE very interesting paper by Drs. F. C. Willmott and G. W. Robertson in THE LANCET of Oct. 23rd, on cases of Senecio Poisoning in man in South Africa has suggested to us that the results obtained by us some years ago may interest a wider circle of readers than those of the technical journals in which our papers[1] were published. At the same time some corrections and additions may be made in the accounts of our pharmacological work.

Senecio poisoning has been known for some years to be the cause of a characteristic form of liver cirrhosis in cattle and horses, in Canada, where it is known as Pictou disease, in South Africa (Molteno disease) and in New Zealand (Winton disease). The connexion between the disease and the plants was first established by the careful experimental work of Gilruth, Chase, and Pethick, an account of whose work may be found in the paper of the senior author already cited. The chemistry of the *Senecio latifolius* was investigated by one of the present writers under Professor Wyndham R. Dunstan's direction, and resulted in the isolation of two alkaloids, senecifoline and senecifolidine, which were examined by pharmacological experiment and were found to induce the same effects in animals as had previously been described by the veterinary investigators of the disease in cattle. Very large doses caused acute poisoning marked by excitement and convulsions from stimulation of the higher divisions of the central nervous system. But these were not of so much interest as the symptoms which followed from a single medium dose, or better from small doses repeatedly given by the mouth or subcutaneously. These corresponded closely with the disease arising from feeding the plant to laboratory animals or cattle, and also with the symptoms described by Drs. Willmott and Robertson. The onset was slow, no effects following the injection of a single dose for several days; the animal then began to lose weight, diarrhœa and vomiting, general weakness, staggering gait and apathy followed, developing into stupor with low temperature and final failure of the respiration. Blood was often vomited or passed in the stools and was almost invariably found in the stomach and bowel post mortem. A certain amount of ascites was generally present in cats and sometimes this was very marked, the abdominal cavity containing large quantities of bile-stained fluid. Congestion of the stomach and duodenum with masses of black blood was present, whether the poison was given by the mouth or hypodermically. The liver was swollen and congested, and microscopically many of the liver cells were found in a state of degeneration, while the interstitial tissue was swollen and infiltrated with round cells which extended between the liver cells. The whole organ presented the appearance of early cirrhosis; the small laboratory animals did not live long enough to develop the later stages described in cattle, but there could be no doubt that the symptoms were of the same character. The gall-bladder and ducts were filled with dark very viscous bile which could be pressed into the gut only with some difficulty.

These experiments were all performed with the alkaloids of *Senecio latifolius* of South Africa, and showed conclusively that these alkaloids are responsible for the disease there known as Molteno disease. We then took up the study of the *Senecio Jacobæa* or ragwort, using samples grown in this country and in

[1] H. E. Watt: Trans. Chem. Soc., xcv., p. 466, 1909; A. R. Cushny: Journ. Pharm. and Exp. Therap., ii., p. 531, 1911, and Abstract in Proc. Roy. Soc., B, lxxxiv., p. 188, 1911.

Canada, where it is the cause of Pictou disease. To our surprise these caused no symptoms in animals, and in a previous communication it was suggested that this might arise from errors in the collection or drying of the plants. Many subsequent experiments with *Senecio Jacobæa* grown in Canada or in different parts of this country from Morayshire to Surrey have always shown it to be poisonous to animals; plants collected from the stage of seedlings to the final withering and dried and prepared in different ways have proved poisonous in doses which were practically equal. And one of us has succeeded in isolating from the Canadian *Senecio Jacobæa* alkaloids which, while differing in some chemical properties from the alkaloids of *Senecio latifolius*, resembled them in toxicity and in the symptoms induced experimentally. We are, therefore, quite unable to suggest why the first experiments failed to poison animals, but we withdraw the statements on the subject made in the previous paper. The *Senecio Jacobæa* of Canada and of this country is equally poisonous with the *Senecio latifolius* of South Africa, induces the same symptoms, and owes its toxicity to related alkaloids. Other species of the genus *Senecio* were examined. *Senecio silvaticus* proved inactive in one set of experiments, but later was found poisonous, though perhaps less so than the *Senecio Jacobæa*. *Senecio vulgaris*, the common groundsel, resembled the *Senecio Jacobæa* in toxicity and symptoms.

Ragwort (*Senecio Jacobæa*) and groundsel are very common plants all over England and Scotland, the bright yellow ragwort giving a blaze of colour to wastelands everywhere. It is therefore remarkable that ten years ago when I made inquiries of the Board of Agriculture no case of cattle-poisoning from ragwort in this country was known, though Sir Stuart Stockman was familiar with its effects in the Colonies, and had made special inquiries as to the occurrence of the disease here. During the war, however, he wrote that an outbreak had occurred in England, and one of us on examining an extract of the ragwort in the hay on which the cattle had been fed found it produced the typical action in rats. The rarity of the disease in England appears to be due to the abundant hay crop. When this is deficient, and contains an undue amount of ragwort, as occurred during the war on the farm in question, there results the same disease as is known at Pictou, where the plant is apparently widespread, and in South Africa in drought when the animals are driven to eat the plant which they generally avoid.

The British Empire, however, does not seem to have a monopoly of this disease, for F. V. Holmboe wrote one of us in 1915 from Lyngdal in Norway, where the *Senecio Jacobæa* is very abundant, and where cattle died of a disease called "Sirasyke," which presented the characteristic symptoms of senecio poisoning. Details are given in his article in the *Norsk Veterinaertidsskrift*, 1915; apparently the farmers of his district always suspected a connexion between the ragwort and the disease, and this now seems to be fairly established. Holmboe suggests that the disease also occurs in Denmark.

The extension of the incidence of senecio disease from cattle and horses to man by Drs. Willmott and Robertson's valuable observations may draw attention to a form of poisoning which has not yet received the attention it deserves. In conclusion, it may be added that there is not the least probability of cases being met with in man in countries in which agriculture and milling are even moderately developed. Senecio is not met with in our wheatfields nor in those of the countries from which we draw our wheat, and our milling processes would remove its seeds from the corn if it were present. Senecio poison can only reach the flour when the winnowing is carried out by the most primitive methods.

BRISTOL HEALTH COMMITTEE: RESIGNATION OF CHAIRMAN.—Dr. Colston Wintle has resigned the chairmanship of this committee, which he has held for 16 years, having been a member of the committee for 25 years. This resignation, which is occasioned by ill-health, was received by the committee with expressions of sincere regret and of warm appreciation of Dr. Wintle's services.

MALIGNANT GROWTHS OF THE UPPER JAW AND ANTRUM:

A SURVEY OF THE NOTES OF 39 CASES.

BY EDWARD D. D. DAVIS, F.R.C.S. ENG., L.D.S. R.C.S. ENG.,

SURGEON TO THE NOSE, THROAT, AND EAR DEPARTMENT, CHARING CROSS HOSPITAL.

MALIGNANT growths of the upper jaw appear to be relatively uncommon. Butlin[1] states that he saw less than one case per year. As these growths frequently arise in the nose or its accessory sinuses, producing nasal symptoms first, more cases are seen in nose and throat clinics than elsewhere. Eighteen cases of this series have been shown and discussed by laryngologists during the past five years at the Laryngological Section of the Royal Society of Medicine, and the remaining 21 have been under the direct observation of the writer. Malignant growths of the naso-pharynx, mouth, or palate which have involved the maxilla are not included.

These 39 cases may be subdivided as follows: (*a*) Squamous carcinoma, 19; (*b*) round-celled sarcoma, 5; (*c*) endothelioma or columnar carcinoma, 7; (*d*) papillomatous growth, 3; (*e*) chondro-sarcoma, 2; (*f*) spindle celled sarcoma, 2; (*g*) melanotic sarcoma, 1.

Classification According to Histology.

(*a*) *Squamous Carcinoma.*—The majority of cases of squamous carcinoma began in the ethmoid and spread along the orbital plate or roof of the antrum, whilst a few originated in the orbital plate itself. The soft friable suppurating growth, taking the line of least resistance, filled the antrum, then eroded and absorbed its walls and sprouted through the thin orbital plate, to become adherent to the orbital contents and capsule of Tenon. The thin bone of the facial wall was frequently perforated near the infra-orbital foramen or in front of the malar recess of the antrum, and a characteristic puffy swelling of the cheek below the eye was produced. In this type of case recurrence after operation took place in the soft tissues of the cheek in this position. The more extensive growths perforated the posterior wall of the antrum into the pterygoid fossa, where it is impossible successfully to eradicate the disease. The alveolus and palatal process were the last to be eroded, and in many cases in which the growth was excised the palatal process or muco-periosteum of the palate was saved, and was not an area of recurrence. Wendell C. Phillips[2] has collected and recorded in detail 16 cases, which were described as burrowing or boring epitheliomata or "epithelioma térébrant," occurring in connexion with a tooth or tooth-socket, and were evidently squamous carcinomata which filled the antrum, and then burst through the alveolus after the extraction of teeth for the relief of pain. There was one doubtful burrowing epithelioma, which appeared as a thick-walled dental cyst in a man of 66. The cavity of the cyst extended horizontally into both palatal processes of the maxillæ, bulging up the floor of the antrum and nose. A section was stated to be epithelioma. The whole of the diseased tissues were freely removed, and there was no sign of recurrence three and a half years later.

A true case of burrowing epithelioma is described by Stanley Colyer.[3] It was limited to the alveolus and did not involve the antrum. Another similar case is recorded in Tomes's[4] "Dental Surgery." Eighteen cases of squamous carcinoma of the upper jaw were extremely malignant rapidly growing tumours which, when no operation was undertaken (5 cases), killed the patients in about six months, and others when ruthlessly and, apparently, completely excised, recurred within 12 months after operation. Secondary growths were present in the upper deep cervical glands in three advanced glands.

(*b*) *Round-celled sarcoma.*—The so-called round-celled sarcoma, of which there were four cases, originated in the ethmoid and occurred in patients of about 40 years of age and upwards, and were clinically identical with

the squamous carcinoma. This type of growth is considered by some observers to be less malignant. It is recognised that some sections of carcinomata of this region resemble round-celled sarcoma, and some cases of carcinoma have been called sarcoma. In all four cases the disease recurred after operation. One true round-celled sarcoma arose in the deep tissues of the cheek and eroded the facial wall of the antrum.

(*c*) *Endothelioma or columnar-celled carcinoma.*—The seven endotheliomata or columnar-celled carcinomata arose in the ethmoid. These were a more favourable type and were known not to recur after operation for three to five and a half years. One early case died of secondary growths in the cervical and mediastinal glands four and a half years after the removal of the primary growth. It should be noted that sections of columnar-celled carcinoma may resemble endothelioma, and are occasionally described as such.

(*d*) *Papilloma.*—The three papillomatous growths occurred in the region of the inferior turbinal, and were more benign than malignant, but small recurrences appeared at long intervals.

(*e*) *Chondro-sarcoma.*—There is a rarer type of malignant chondro-sarcoma found in young subjects about the age of 16 in which the eyes are displaced, the nose expanded, and marked deformity of the face occurs. This type is invariably inoperable. There were two such cases, and it was difficult to say where the growth originated.

(*f*) *Spindle-celled sarcoma.*—Two cases of spindle-celled sarcoma with a few myeloid cells apparently commenced in the antro-nasal wall or palatal process, and did not recur for 5 and 8 years after free excision.

(*g*) *Melanotic sarcoma.*—Lastly, there was one melanotic sarcoma reported by G. Wilkinson [5] which originated in the vestibule of the nose.

There was not one case in which it could be definitely shown that the growth originated in the muco-periosteal lining of the antrum.

Symptoms and Diagnosis.

Early diagnosis is of the utmost importance, but is rendered difficult by the fact that cancer in itself does not produce any specific clinical signs or symptoms, and it is only when the cancer cells form a tumour that a series of mechanical results appear. Furthermore the development of these is slow and insidious, particularly when the growth is in a hidden cavity like the nose, and a patient often only consults a doctor when such symptoms are well marked, frequently too late for the successful removal of the growth.

The commonest first symptom is a persistent pain in the cheek radiating to the forehead or temporal region, accompanied by a blood-stained discharge from one nostril in an elderly patient. The teeth are frequently blamed for the pain and are extracted. Severe epistaxis, not arising from the usual causes, with pain in the cheek, should raise suspicions of a growth. In this series of cases the average duration of such symptoms before the patient was seen was three months. An examination of such a case revealed a vascular polypoid-looking swelling in the middle turbinal region which bled freely when probed. Transillumination showed a dark antrum, and an X ray photograph demonstrated a still more definite opacity of that region. If there is any doubt after such findings, exploration of the antrum with preparations for excision of the upper jaw is advisable. Later symptoms were proptosis, epiphora, and expansion of the walls of the antrum, and finally, too late, a puffy swelling of the cheek below the infra-orbital margin.

Anything approaching a pre-cancerous condition has not been observed, and none of the cases under review had any previous affection of the nose. Five of the squamous carcinoma cases were inoperable when first seen because the tissues of the cheek were infiltrated, the orbit extensively invaded as shown by marked proptosis, and the upper deep cervical glands were involved. These five patients died in an average of about three months after their first visit and six months from the apparent onset of symptoms.

Of the 13 typical squamous carcinoma cases subjected to operation, in six the disease recurred within 12 months. Four cases could not be traced and the result is unknown, and three cases were free from recurrence for periods of 12 months to two and a half years. The recurrences were in the cheek, orbit, or ethmoid, and occasionally secondary growths appeared in the cervical glands. The deep cervical glands between the ramus of the jaw and the mastoid process were the first to be infected. Local recurrence took place in all four cases of round-celled sarcoma. The seven endotheliomata were free from recurrence for periods varying from three to five and a half years. The two spindle-celled sarcoma cases are still well five and eight years after operation.

It is generally found at the operation that the growth is more extensive than anticipated, but, on the other hand, cases which appear to be hopeless often do better than expected. If excision is performed the patient has the satisfaction of knowing that a determined effort has been made to rid him of the disease, and the condition of the inoperable patient is truly a miserable one.

Operative Technique.

The operations carried out by the writer have had the following underlying principles: (1) A thorough exposure of the growth to ascertain its limits as far as possible; (2) complete excision of the growth together with a free margin of healthy tissue. The orthodox anatomical operation of excision of the upper jaw was discarded. The teeth are put in order by a dental surgeon as soon as possible after the first visit, and if it is anticipated that half of the palate will have to be removed, a denture or obturator is made and inserted immediately after the completion of the operation. Permission is obtained from the patient to enucleate the eyeball if a more thorough clearance of the orbit and ethmoid is likely to be required, and in two of the above cases the eye on the affected side became blind soon after a recurrence was noticed. Intratracheal ether is the most satisfactory anæsthetic, and was employed without any disadvantages in all the later cases. A preliminary laryngotomy was employed in four of the first cases with plugging off of the pharynx, but the patients did not make such a rapid recovery, and appeared to feel the effects of the operation more than those who had intratracheal ether. The usual Fergusson incision was made from the fronto-nasal suture down the side of the nose and through the upper lip. The cheek was then reflected upwards and backwards as far as possible. The horizontal portion of the incision along the infra-orbital margin was omitted because it did not give much more access to the area of operation, and leads to the unsightly deformity produced by œdema of the lower eyelid. The nasal bone, nasal process, and facial surface of the maxilla as far as the malar were removed to expose the growth, and, if the palate was not involved, the floor of the orbit with the growth was scooped out. In the cases of carcinoma the floor of the orbit was always eroded and infiltrated. When the main mass of the growth was removed portions of it were generally found in the ethmoid, and the ethmoid was vigorously attacked with punch forceps and spoon until the inner wall of the orbit as far back as the sphenoid and up to the base of the skull had been removed. The contents of the orbit were examined, and occasionally growth was found adherent to the capsule of Tenon. In two cases only was it necessary to remove the palate, and then the more common operation of excision of the upper jaw was carried out.

If possible, the muco-periosteum of the palate should be saved to form a flap to close off the mouth from the nose, and if this is done patients make a more rapid recovery. In the older patients the interference with the mouth and the taking of food when the palate is removed adds considerably to the severity of the operation. A recurrence in the palate has not been seen. The hæmorrhage was not dangerously excessive, and preliminary ligature of the external carotid artery was done in two cases only, and was considered unnecessary unless a dissection of the glands in the neck is carried out as the first stage of the operation. So experienced an operator as Butlin did not approve of a preliminary ligature of the carotid. All the patients made a rapid recovery, and not one died from the immediate or remote effects of the operation.

In view of the fact that secondary growths occur in the cervical glands of the neck in addition to the local recurrence, the advisability of a gland operation must be considered in each case. It is certain that removal of the primary growth and the gland operation cannot be done satisfactorily in one stage, and when the two-stage operation is undertaken it is a debatable point whether the primary growth or the glands should be removed first. In most cases it is better to attack the primary growth first, but each individual case must be considered on its merits.

References.—1. Henry T. Butlin: The Operative Surgery of Malignant Disease. 2. Wendell C. Phillips: Primary Epithelioma of the Antrum of Highmore, Journal of Laryngology, Rhinology, and Otology, 1838, vol. xiii., p. 325. 3. Stanley Colyer: Transactions Odontological Society of Great Britain, June, 1901, p. 231. 4. Tomes and Nowell: Dental Surgery, 1905, p. 717. 5. G. Wilkinson: Transactions, Laryngological Section, Royal Society of Medicine, vol. v., Part 2, Nov. 3rd, 1911, p. 11.

THE DISAPPEARANCE OF A MEDIASTINAL NEOPLASM UNDER X RAY AND RADIUM TREATMENT.[1]

BY R. T. LEWIS, M.R.C.S. ENG., L.R.C.P. LOND.,
HOUSE PHYSICIAN, UNIVERSITY COLLEGE HOSPITAL.

THE case here described is that of a man who appeared to be suffering from neoplasm of the mediastinum, but who, under the influence of X rays and radium, appeared to lose some of the signs and symptoms of the disease.

H. C., aged 34 years, had noticed a lump forming below the inner end of the left collar-bone in front of the chest 20 months ago in Mesopotamia. Shortness of breath developed, as well as pain in the left arm 18 months ago, and he was invalided home to England. Fourteen months ago, whilst in the Tooting Military Hospital, an enlarged gland was found in the left side of the neck. It was removed, and revealed the microscopical appearance of a lymphosarcoma. He had three short exposures to X rays, resulting in the complete disappearance of the lump in front of the chest and diminution in size of the cervical glands.

Eventually the patient was admitted to the Middlesex Hospital in November, 1919, under the care of Dr. Essex Wynter, and the remaining glands in the neck disappeared under exposure to radium; they reappeared whilst in hospital in February of this year, but again disappeared under the influence of radium. Dr. Wynter states that a very definite growth was seen in the chest by means of a skiagram. The patient then left the hospital and for four months resumed his work as an architect's draughtsman, but the glands reappeared in July of this year, and a new feature made its appearance—viz., considerable œdema of the front of the chest as well as of the left upper arm.

He came under the observation of Dr. S. H. Bates, and was admitted to University College Hospital on August 30th under the care of Dr. Batty Shaw. His condition at that time was as follows:—

He was markedly wasted, distinctly cyanosed, and was very short of breath. There was a glandular swelling in the left posterior triangle as large as a hen's egg, also in the left axilla. He had a left "sympathetic" eye. His voice was hoarse and weak, and there was complete paralysis of the left vocal cord. There was œdema of the front of the chest from the clavicles to the costal margins, and this extended to the posterior axillary lines. The area revealing œdema showed also distended veins. The left chest was dull from the clavicle to the base in front; it was impaired to percussion from the apex to the left scapular spine and absolutely dull below this level. The breath sounds were subtubular over the upper part of the left lung, but below the level of the scapular spine the breath sounds were absent; there was defective movement of the left chest. The impulse of the heart was obscured and the dullness of the heart reached the right edge of the sternum. Screen examination showed almost complete opacity of the left chest, and the same opacity was visible in the X ray plate. The blood count merely showed secondary anæmia; the Wassermann test was negative. He was subjected to X ray exposure on Sept. 14th and 24th, and considerable diminution in size was noticed in the cervical and axillary glands as a result.

Results of Radium Treatment.

Thanks to the courtesy of Captain A. E. Hayward Pinch the patient was then exposed to the influence of radium on five occasions. Captain Pinch's observations confirm in all details the above clinical report. By screening he found complete loss of translucency of the whole of the left lung except for a small area under the middle of the left clavicle. The position of the heart appeared to be as above indicated. It gradually became evident that the left chest was losing its extreme dullness to percussion and that the œdema of the chest wall and arm was considerably less, and at the present moment, though the note is impaired, the left lung is much more resonant than it was, the only trace of dullness being present at the left base. Fluid was suspected at this spot and an aspiration needle was inserted. All the fluid that could be removed amounted to 37 c.cm. X ray plates of the chest taken shortly after reveal the fact that the upper part of the left chest has become very much clearer, but that there is still opacity of the extreme base of the chest. So far as the mediastinal shadow is concerned, there can be seen an increase of the ordinary shadow of the mediastinum to the right, the edge being sharp; increase of the shadow of the mediastinum to the left is visible, but presents a woolly as opposed to a sharp edge. The patient's general condition has greatly improved, and he has now completely recovered from a severe attack of left-sided herpes zoster which developed during October.

Remarks.

On clinical grounds there was reason to believe that just as the cervical gland had disappeared on three separate occasions previously under the influence of X rays and radium, so now on this fourth occasion one had disappeared as well as the axillary glands under similar treatment. It is assumed that the dullness of the left chest was due, in part or wholly, to infiltration of the lung by the malignant growth, and that this infiltration not only involved the sympathetic and left recurrent laryngeal nerves, but also caused venous and lymphatic obstruction over the upper left arm and chest, and caused enlargement of the veins of the chest wall. The disappearance of the dullness of the left chest under X rays and radium harmonises with the view that the infiltration of the lung by malignant growth had been overcome, hence the relief from some of the above signs and symptoms.

An obvious objection to this view must be raised because it is conceivable that the dullness to percussion of the left chest and the X ray appearances were entirely due to a large pleural effusion, and that it is the resorption of this pleural effusion which led to the improvement of signs and symptoms, the pleural effusion, the dropsy of the chest wall, and the enlarged veins being all due to thrombosis of the innominate veins and their branches, and that the recovery from this thrombosis and not the disappearance of the malignant growth is the cause of the present happy result. In answer to this objection it may be said that the heart never has been dislocated as much as it should have been had the left chest been full of fluid from the top to the bottom; that it is not a feature of blockage of the large veins of the neck occurring in mediastinal neoplasm to pass off, either spontaneously or as the result of X ray and radium treatment; that in such blockage of the veins with resulting œdema and pleural effusion the obstruction is generally due to direct invasion of the vessels by the neoplasm and is terminal. It seems therefore probable that X rays and radium have directly checked the growth and even caused retrogression of the mediastinal neoplasm. Comment has been made on the plates now shown, and the question has been raised whether they demonstrate the existence of a mediastinal neoplasm. It is to be regretted that no plate can be shown indicating the condition of the mediastinum before the application of X rays or radium, but a perusal of the clinical history and a review of the physical signs and symptoms make it probable that the cause of the symptoms and signs could be none other than a neoplasm of the mediastinum, and it may be even that the original growth (as well as its extension to the left lung) has become reduced under the influence of X rays and radium.

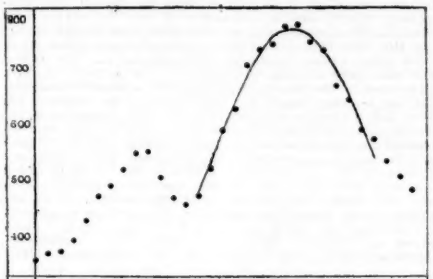
[1] Case shown at the Clinical Section of the Royal Society of Medicine on Nov. 13th, 1920.

A NOTE ON

THE PRESENT EPIDEMIC OF SCARLET FEVER.

BY JOHN BROWNLEE, M.D., D.SC. GLASG.,
DIRECTOR OF STATISTICS, MEDICAL RESEARCH COUNCIL.

THE present epidemic of scarlet fever in London suggests a note. The epidemic in London starts usually in May or June, and during July a well-marked rise in prevalence occurs, but the school holidays beginning in August bring about notable decrease in the amount of the disease. This effect is shown in the accompanying



Graph showing the weekly incidence of scarlet fever in London during recent epidemics. The solid circles represent the mean number of cases of scarlet fever notified per week, the number of the week from the commencement of the year being given on the base line. The normal curve has been fitted by the figures of the 34th to the 40th week.

diagram. In this diagram, the nine large epidemics since the introduction of notification in 1890 have been averaged, the mean number of notifications in each week being shown by solid circles. It will be noticed, how, after an initial rise, the number of notified cases falls during the month of August, to rise again to a maximum somewhere about October. The closing of the schools in August has then an obvious effect in limiting the spread of infection. In this diagram showing these phenomena the normal curve of error has been fitted to that part of the epidemic which follows the holidays. The figures for the seven weeks following the holidays—namely, the thirty-fourth to fortieth weeks, were used; it will be seen that the fit is very good. For the eight following weeks theory and fact are in excellent accord. As a normal curve of error describes the facts so successfully it is suggested that a prophecy regarding the future course of the present epidemic in London may be offered. The present epidemic, however, differs from the great majority. It began very late, in fact so late that the usual effect of the holidays in diminishing the amount of the disease is not observed. The epidemic is thus not cut in two; though the probability is that the holidays must have had an effect in diminishing the total number of cases. From the time the schools opened to the present moment the numbers of notifications for a sequence of nine successive weeks are known. To these numbers the normal curve of error has been fitted by the method of least squares. The actual and theoretical figures are given in the accompanying table; it will be noticed that the two correspond very closely. The formula is also given; the number of notifications expected in the succeeding weeks have also been calculated. It seems, if the law of average holds, that the maximum number of cases will occur in the week Nov. 14th to 20th, and henceforth the epidemic will begin to decline.

Table Showing the Number of Notifications of Scarlet Fever in London, Autumn, 1920.

Week.	No. of cases.		Week.	No. of cases.	
	Actual.	Theoretical.		Actual.	Theoretical.
Aug. 29th-Sep. 4th	437	444	Oct. 10th-16th	906	908
Sept. 5th-11th	531	523	,, 17th-23rd	943	964
,, 12th-18th	601	604	,, 24th-30th	1025	1004
,, 19th-25th	703	687	,, 31st-Nov. 6th	—	1028
,, 26th-Oct. 2nd	771	768	Nov. 7th-13th	—	1038
Oct. 3rd-9th	826	842	,, 14th-20th	—	1026

Formula.—$\log_{10} y = 0{\cdot}8854 + 0{\cdot}0443\,x - 0{\cdot}0038\,x^2$, where y is the number of cases in each week and x is the distance from the week of origin—namely, Sept. 26th-Oct. 2nd.

It may be inquired what degree of prophecy was possible from a smaller stretch of figures. If the first five weeks are taken, the most untrustworthy of the figures, the maximum is thrown into the week Dec. 5th to 11th, an unlikely date, in which week the maximum number of cases would be over 3000, also a very unlikely number. If the seven weeks are taken the maximum is placed in the week Oct. 31st to Nov. 6th, with a maximum number of notifications of rather less than 1000. This result does not differ very much from the one obtained by taking nine weeks, which may therefore be taken as probably sufficiently accurate. I hope to return to the question of the effect of school attendances and school holidays on the spread of scarlet fever.

Note.—Since the above was written (Nov. 1st) the numbers of notified cases for London are known for two more weeks—the week ending Nov. 6th and that ending Nov. 13th; they are, respectively, 879 and 980. The corresponding numbers for England are as follows. The last day of the week is given, with the corresponding number of cases:—

Sept.	11th	2308	Oct.	16th	3515
,,	18th	2562	,,	23rd	3509
,,	25th	2900	,,	30th	3757
Oct.	2nd	3249	Nov.	6th	3356
,,	9th	3187	,,	13th	3781

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF

EPIDEMIC MYOCLONIC ENCEPHALITIS WITH RECOVERY.

BY MICHAEL W. BULMAN, M.B., B.S. LOND., M.S.A.,
LATE HOUSE PHYSICIAN TO THE MEDICAL UNIT, LONDON HOSPITAL.

IN view of the rarity of recorded cases of this condition the following case seems worthy of record.

A. W., aged 8, was admitted to the London Hospital on Sept. 7th, 1920, with the history that he had complained five days' previously of pain in both legs. During that night he had vomited twice, and the next day complained of headache. His speech became incoherent, and he did not seem to know what he was doing. He was unable to feed himself. The following day twitching movements of the limbs were observed, and from that time until the time of admission he had not spoken. When first seen by me the patient's general appearance and facial expression were those of fright. The eyes were wide open and staring, the pupils moderately dilated and inactive to light. At frequent intervals he uttered a sharp, loud cry. The whole body was in ceaseless motion, the patient aimlessly running round in circles, or if he was laid on a couch he would lie in an attitude of general flexion for a few seconds and then rise on all fours or kneel, but still maintained the ceaseless aimless motion. In addition, ryhthmic flexor movements of the arms were present, but were not well marked. The arm, trunk, and leg reflexes, with the exception of the knee-jerks, were unobtainable. The knee-jerks and corneal reflexes were present. The patient was given morphia 1/12 gr., which quickly quieted him. Lumbar puncture yielded about 20 c.cm. of clear fluid under increased tension. This fluid contained no excess of protein and no cells.

On the following day, the 8th, the muscular twitching was much more marked in various muscle groups of arms, legs, and trunk, but was most noticeable in the right arm. The facial muscles and eyelids were similarly affected. These movements were rhythmic, purposeless, not choreiform, and at the rate of about one hundred per minute. No reflexes were obtainable in arms or legs, and the abdominal reflexes were not obtained. The child lay curled up in bed and cried irritably if touched or moved. He did not speak or feed himself and had involuntary urination. No cranial or peripheral nerve lesion could be detected. The pupils were now small and inactive, the pulse-rate 96, and temperature normal. Syrup chloral, 1 drachm, was effective in keeping the patient quiet. Lumbar puncture was repeated on the 9th and yielded about 30 c.cm. of clear fluid under increased tension, the fluid this time

containing one small lymphocyte per c.mm., but no excess of protein.

From this time onward the patient began to improve gradually. The chloral was needed less frequently, and the child lay in bed with his eyes open as though wide awake. He was able to indicate by crying when he wanted food, and appeared to recognise his mother, although he did not talk at all, and took no notice of his surroundings. The movements began to be less marked but were brought out by any disturbance of the patient. They were still most marked in the right arm. He commenced to take food very well, especially fluids. The involuntary urination continued. The reflexes began to return, the ankle-jerks and plantar reflexes, and the lower segment abdominal reflexes before the knee- and arm-jerks and epigastric reflex. The patient still lay curled up in bed with a certain amount of apparently voluntary rigidity. He resented being moved.

On the 16th, nine days after admission, the patient began to talk and in a few hours was speaking normally, subsequently to which he began to sit up in bed and take a normal interest in what was going on. Involuntary urination was only present if the patient became excited, and the clonic twitchings were also liable to return in slight degree under the same circumstance. A white cell count showed a total of 5600, with 36 per cent. polymorphs, 6-5 per cent. eosinophils, and 52·5 per cent. small lymphocytes, the other white cells having a normal proportion. This count was unfortunately done rather late in the course of the disease. On two occasions the patient was allowed to get up for a short time, but as generalised though not severe choreiform movements developed the patient was again kept in bed till these had subsided.

On discharge the only demonstrable abnormality was a very slight general incoördination, involving all four limbs and affecting mass movements rather than fine movements, similar to that seen in patients recovering from chorea. The arm, leg, and trunk reflexes were all present and normally active, or possibly very slightly increased. Sensation to pain, touch, heat, and cold, and the stereognostic sense and sense of position were all present and normal. He had gained 8 lb. in weight, and looked perfectly healthy. The treatment given was purely expectant and symptomatic. Chloral was very useful in keeping the patient quiet after the initial dose of morphia. Fluids in as large a quantity as he could take were given, and when he had sufficiently improved iron was prescribed.

Conclusions cannot, of course, be drawn from a single case, but certain points may be emphasised. In the first place the involuntary urination which occurred in this patient was not the result of retention, as in the other three cases of this disease which I have seen,[1] but was a simple involuntary voiding due, presumably, to clouding of consciousness, such as is often seen in the lethargic state of the disease. Secondly, the leucocytosis reported by Dr. A. W. M. Ellis in the previous cases was not present in this patient, though, unfortunately, in this case the white count was not done till late in the disease. Finally, in this patient the increase of fluid intake and the improvement of his general condition were practically synchronous. Whether this increase of fluid intake was cause or effect of the improvement is difficult to determine, but it had been noted in the former cases that owing to the mental condition of the patients only very small quantities of fluid were taken, and that the general appearance of these patients suggested a fluid want. For this reason in this patient attention was paid to this point from the beginning. It may well be that to increase fluid intake by every possible means, with a view to supplying actual lack of fluid and to diminish toxæmia, is a point in treatment worth noting.

In conclusion, I wish to express my indebtedness to Dr. Ellis for permission to and assistance in publishing this case.

A PLASTIC OPERATION TO RESTORE PART OF THE EAR.

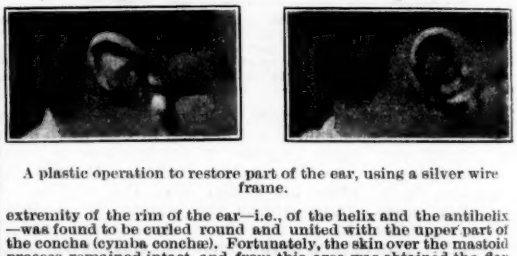
USING A SILVER WIRE FRAME.

BY HENRY CURTIS, B.S., M.D. LOND., F.R.C.S. ENG.,

SURGEON TO THE METROPOLITAN HOSPITAL; LATE SURGEON TO THE MILITARY HOSPITAL, ENFIELD-ROAD, E., AND TO THE HOSPITAL FOR FACIAL INJURIES, BROOK-STREET, W.

THE following operation was devised by the writer during the war to restore a large part of the external ear shot away by a bullet. The use of the silver wire frame as a model can be extended to meet still greater deficiencies, and even in complete absence of the ear it would, the writer suggests, materially facilitate and expedite the procedure of Szymanowski, which, according to Warbasse, "involves ten or twenty operations, extending over at least a year ..... for the shaping and modelling of the auricle, as there will always remain room for improvement." Owing to military exigencies and the transfer of the patient, no secondary operation could have been performed; but the appearance presented in the second photograph, though not yet perfect, is a decided improvement on the original condition, and afforded the greatest satisfaction to the patient and, indeed, was a source of the utmost pride. When King George and Queen Mary graciously visited the hospital on March 28th, 1916, three weeks after the operation, their Majesties, according to the daily papers, were very interested in the patient, who was described as "the soldier with the silver ear." The present writer, being engaged in the operating theatre at the time, was unable to prevent currency being given to this fiction!

History.—Sergt. P. J. K., an Australian in the first Canadian contingent, shortly before admission to the Enfield-road Military Hospital, London, under the writer's care, was struck on the right side of the face by a bullet which passed from before backwards over the right malar eminence, just grazing it. The bullet then pierced the right auricle, making en route a deep, incised, horizontal wound of the cheek, resulting in a >-shaped scar, the lower limb of the > extending to the lower edge of the tragus. This and the scar below the eye are shown in the first photograph, in which also the bullet is seen to have struck the external ear, or auricle, at the base of the tragus, at its junction with the anterior or ascending limb of the lobule, and to have destroyed the lower half, or nearly two-thirds, of the concha—that is to say, the whole of the cavum conchæ and the entire rim of the corresponding segment of the auricle, including the junction with the lobule. The torn free extremity of the fragment remaining of the lobule was found to be turned forward on itself and united to the posterior end of the >-shaped scar in the cheek, obliterating the intertragic notch normally separating the tragus and the antitragus. The lower



A plastic operation to restore part of the ear, using a silver wire frame.

extremity of the rim of the ear—i.e., of the helix and the antihelix—was found to be curled round and united with the upper part of the concha (cymba conchæ). Fortunately, the skin over the mastoid process remained intact, and from this area was obtained the flap used in restoring the auricle. Prior to the war the patient had been invalided out of the army on account of right-sided otorrhœa, which subsequently ceased. It recurred, however, immediately after the present injury, and continued to a slight extent in spite of treatment in the interval during which the plastic operation was purposely postponed. At the operation iodine and a gauze plug were inserted into the external meatus, and during the healing of the plastic operation wound iodoform gauze was used for the same purpose to minimise infection.

Operation.—March 7th, 1916. The deformed fragment of the lobule of the ear, where turned over and attached to the scar on the cheek, was detached and pared, and the lower end of the helix and antihelix attached to the rim of the concha was similarly dealt with, so that subsequently, by suturing, the pared edges of lobule and helix could be united to the adjacent edges of the new flap when prepared and in position, thus completing the rim of the auricle. A broad oblong flap of skin and subcutaneous tissue, having its contracted base at the posterior margin of the bony orifice of the external meatus, was then dissected up from over the mastoid. It measured about 1 inch from before backwards, and was about 1½ inches in width, from above down, extending below, to about the tip of the mastoid. At its base, at the orifice of the external meatus, the sides of the flap slightly converged. Before the operation a model of the outline of the concha, antitragus, and intertragic notch, as far as the tragus, had been made from the sound (left) auricle, from a piece of stout silver wire such as is used for wiring the patella. Placed in the reversed position, this formed an accurate model of the corresponding parts missing in the injured right ear on which to mould the flap used to reconstitute the new auricle. The extremities of this wire model were inserted into short canals burrowed into the antihelix, above and behind, and into the lower edge of the tragus in front.

The wire being thus fixed in position, the flap reflected from the mastoid was drawn over the wire and a fold of skin stitched round the wire, to form a ridge reconsti-

[1] Ellis, A. W. M.: THE LANCET, 1920, ii., 114.

tuting the tragus. The free margins of the flap were then sutured to the pared edges of the lobule, helix, and antihelix, and elsewhere to what remained above of the concha, and behind and below of the antihelix and tragus, and the now restored rim of the auricle. The flap being found more than sufficient for this purpose, it was incised from below upwards parallel with the lower free edge, and part of it was sutured to the back of that part of the flap which had been used to form the outer or anterior surface of the new concha, what remained over being allowed to lie on the exposed surface of the mastoid and stitched to the skin on the posterior edge of this gap, the soft parts coming together without tension. It is probable that in incising the mastoid flap for the purpose described the vitality was endangered by cutting rather too far, thus endangering the vascular supply, for on the third day, while the new auricle appeared healthy, the portion of flap used to cover in the exposed mastoid looked dusky, and it eventually sloughed and was cut away on March 13th. Some of the stitches were removed the same day and most of the remainder on the next. Saline dressings were employed until March 9th, when ganze soaked in hydrogen peroxide was applied to the sloughy area.

The second photograph was taken when the patient left the hospital in May, 1916, with the wound soundly healed and the otorrhœa completely cured. In a few months' time, with the absorption of the œdematous fluid and shrinking of scar-tissue, a very much improved appearance should have resulted. When last heard of, in August, 1916, the patient was on his way to India for garrison duty, as the Military Board decided that he was incapacitated by deafness for further duty on the European front. There was, therefore, no opportunity for any further operation for improving the cosmetic effect, had such been deemed advisable.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF OTOLOGY.

A MEETING of this section of the Royal Society of Medicine was held on Nov. 19th, under the presidency of Sir CHARLES BALLANCE.

The President's Address.

The PRESIDENT, in a short address, reviewed the progress of otology during the last 20 years, especially in autoplastic grafting, adding interesting items concerning the personnel of those who had identified themselves with the specialty in London. He said he looked forward to the eventual establishment of a great central Institute of Otology in London, not for the purpose of controlling individual clinics, but to coördinate and strengthen the work of teaching and research. These should go hand-in-hand, for the teacher who did no research failed to inspire his pupils. Such an institution should be endowed by whole-time men. The profession was as yet only on the threshold of knowledge of diseases of the ear; the internal ear presented problems in physiology, pathology, and treatment which so far had eluded the most sagacious. The labours of otologists would not be finished until the complications now regarded as fatal were no longer so looked upon, nor while the deaf still remained deaf. The council of the section had decided to memorialise the Royal Colleges to grant a diploma in otology. He concluded by the quotation from *King John:* "Be stirring with the times; put on the dauntless spirit of resolution."

Sir WILLIAM MILLIGAN read a paper on

Chronic Catarrhal Otitis Media.

He said the brilliant results obtained from operation in suppurative affections of the temporal bone and its intracranial sequelæ had somewhat thrown into the shade the treatment of the common condition adhesive catarrh, in which treatment he thought there had been no real advance during the past 20 years. The changes in this condition he divided into three: (1) surface epithelial changes; (2) connective-tissue changes; (3) atrophic changes. These might occur either separately or collectively. The principal cause of chronic adhesive catarrh seemed to be repeated attacks of exudative catarrh of the tubo-tympanic mucosa resulting from naso-pharyngeal catarrh, naso-pharyngeal adenoids, and catarrhal conditions of the upper respiratory tract. He described in detail the pathological changes in the various structures. The hypo-tympanum served as a reservoir for some residual secretion which, while out of sight, was too often out of mind, and it acted as a mild but continuous irritant. In time a small tuft of organised connective tissue was formed, which was really an intratympanic buttress, causing a blocking of the tympanic orifice, and so impairing the ventilation of the middle ear. In the treatment of the condition in young children sufficient care was not usually exercised in clearing the middle ear of all exudate. A properly performed operation for removal of adenoids brought such quick relief that there was a tendency to conclude that all was well. But a number of the cases returned in a few years with definite evidence of adhesive changes, and he thought the main reason was that the middle ear had not been drained of all secretion at the time. He advocated incision of the membrana tympani by a fine galvano-cautery and epithelialisation of the edges of the wound for the purpose of draining the middle ear. Reliance upon inflation meant a mere scattering of the exudate for the time being, some of it being blown into the tympanic antrum, later trickling down into the hypo-tympanum, there to remain as an irritant. He believed that intratympanic injections in cases of advanced sclerosis of the middle ear frequently did much harm. Such injections should only be used in the form of a lavage, a wash-through. He held a strong objection to the pumping of fluid into a cul-de-sac whose lining membrane had practically lost its powers of absorption. Future progress in the treatment of chronic adhesive catarrh lay not so much in the use of local applications as in the employment of radio-active substances whose rays had the power of softening and rendering pliable dense sclerotic tissue; he referred to the β and γ rays of radium or its emanation, always with due care as to dosage, duration of exposure, and filtration.

The paper was fully discussed, and Sir WILLIAM MILLIGAN replied.

Streptococcal Leptomeningitis due to Chronic Suppurative Otitis Media.

Among the interesting cases shown discussion was chiefly concentrated upon a remarkable case exhibited by Mr. SYDNEY SCOTT, that of a girl, aged 10, who had streptococcal leptomeningitis due to chronic suppurative otitis media. There was a rapid onset of coma. Mr. Scott performed the radical mastoid operation, with trans-labyrinthine and lumbar thecal drainage, and the patient completely recovered. Ear discharge had been noted by the parents for several months, but had not, apparently, caused ill-health until a week prior to admission, when earache was complained of, and the child lay down in preference to playing. During the week she felt ill and sick, had vomiting and headache, followed by a sensation of falling and twitching of arms and face. She reached the hospital in an unconscious state, when the temperature was 104° F., pulse 130, respirations 30. There were head retraction and extensor rigidity of hamstrings. The discharge from the left ear was purulent and fœtid, and double rotatory nystagmus was present. The operation was done immediately. The mastoid antrum and cells contained pus, granulations, and cholesteatomatous material, and an extra-dural abscess contained nearly a drachm of pus. The cochlea was extirpated in order to open up the fundus of the internal auditory meatus and establish trans-labyrinthine drainage. The wound was packed open with dressings. The cerebro-spinal fluid contained streptococci. Lumbar puncture was repeated 12-hourly during the next few days, and by the fourth day it was pronounced clear and sterile. On the day following the

operation the temperature fell to 99°, and it did not again exceed 100°. On the fifth day the child was taking an interest in illustrated papers, and recovery from this time was practically uninterrupted.

Discussion.

Mr. L. COLLEDGE spoke of a case of his own, aged 13, with the same condition, for which he did an operation similar to that of Mr. Scott. He drained freely through the labyrinth, and recovery ensued.—Dr. DAN MCKENZIE said he also had once or twice done the operation which Mr. Scott described, establishing trans-labyrinthine drainage; one patient, whom he showed at the section meeting some years ago, was still alive and well. He raised the question whether it would be possible to drain as efficiently through the dural wound in the posterior part of the mastoid, without going through the labyrinth, wounding of which destroyed hearing. He tried it in one case, but death occurred after six days, probably because the infective focus could not be found.—The PRESIDENT characterised the case as a magnificent one. The 12-hourly lumbar puncture (in addition to the trans-labyrinthine drainage) he regarded as very important. In such cases, when one had to fight to preserve the life of the patient, destruction of the internal ear was of very subsidiary importance. Recently he had a case of meningitis which was lumbar punctured 29 times; the patient recovered and did very well indeed. The speaker referred to a practice, carried out in America, of puncturing through the membranes between the atlas and the foramen magnum. If that could be done safely, without going too far into the medulla, it seemed to be preferable to going into the lumbar region.

SECTION OF PATHOLOGY.

A MEETING of this section of the Royal Society of Medicine was held on Nov. 16th, Dr. W. S. LAZARUS-BARLOW, the President, being in the chair, when Dr. H. SCHÜTZE read a paper on

Blood Grouping with Dried Material and its Medico-legal Bearing,

in which he demonstrated the possibility of establishing the hæmagglutinin group to which a blood specimen belongs, even after the blood had been dry and exposed to the deteriorating effect of light for as long as five months. By rubbing dried blood with distilled water in a mortar its serum could be reconstructed and the hæmagglutinins titrated as in an undried serum, while in the insoluble flocculi which remained after reconstruction the antigens of the disintegrated red cells were demonstrable. By adsorbing a Group 4 serum with this insoluble residue the dry blood specimen could be diagnosed a second time, which afforded a valuable confirmation of the agglutination result given by the reconstructed serum. The Landsteiner theory of iso-agglutination was shown to have been confirmed by such adsorption tests.

Dr. J. A. MURRAY read a paper on

Autoplasty after Exposure to Hot Air.

In nine mice with spontaneous mammary cancer autoplastic transplantation was performed after an exposure of ten minutes to dry heat. In three, retardation or failure of the graft was observed. This was only a slightly greater proportion of negative results as compared with untreated mice. A description of the appearances at the site of inoculation was given. Homoplastic grafting of a transplantable tumour after the same exposure did not show any effect.

Flagellate Organisms in Otherwise Sterile Urine.

Dr. ARTHUR POWELL described flagellates which had persisted in the bladder of a patient for six years. They were always present in urine drawn with aseptic precautions. The urine was otherwise sterile. The case began with (?) filarial chyluria, but there had been no chyluria for over five years. There had been no symptoms of illness until this year, when a little albumin had appeared in the urine. The organism was usually globular, about 13μ in diameter, in life; all the organisms observed in life with the dark-ground illumination were furnished with two flagella of equal length, except that occasionally a number showed four, which Dr. Powell thought might be due to fission.

SECTION OF OPHTHALMOLOGY.

A MEETING of this section of the Royal Society of Medicine was held on Nov. 12th, under the presidency of Dr. JAMES TAYLOR.

Presidential Address.

The PRESIDENT read his address on Some Neurological Aspects of Ophthalmic Cases, calling attention to the necessity of close coöperation between the ophthalmic surgeon and the physician. Recognition of this necessity had, he felt sure, led to his election as the first physician presiding over the section. He dealt in succession with: (1) ocular palsies; (2) visual failure; (3) defects in the visual fields as subjects in which ophthalmic surgeons and physicians have a common interest.

The Intra-ocular Blood-vessels of the Ox.

Mr. PRIESTLEY SMITH read a communication on this subject, with the view of throwing light on the mechanism by which the blood pressure of the vessels in the eye is rendered lower in the exit vessels than in those which are entering it, and how this loss of pressure is distributed among arteries, capillaries, and veins. The thesis was illustrated by a large number of beautiful slides, the injection and photographing of which were done by a lay helper, Mr. Frederick Lowe, of Wednesbury, quite gratuitously. Mr. Smith said that if it were known how the fall in blood pressure was distributed, the processes going on inside the eye would be better understood—e.g., exactly why certain vessels produced an aqueous fluid, while others took it back into the blood stream. Albino rabbits were experimented with, as the absence of pigment in the eye was a great help. The animal, having been killed by chloroform or by coal-gas, was treated in various ways with the object of filling the intra-ocular vessels with its own blood and fixing them in that condition. The conclusions drawn from the various slides were set forth, but no general deduction was noted.

Mr. FRANK JULER showed and described a case of Plexiform Neuroma, and Mr. P. G. DOYNE a case of Evulsion of Optic Nerve.

MEDICAL SOCIETY OF LONDON.

Study of an Outbreak of Acute Rheumatism in Children under 12 Years.

A MEETING of this society was held on Nov. 22nd, Sir WILLIAM HALE-WHITE, the President, being in the chair, when Dr. F. J. POYNTON read a paper, in which he was associated with Dr. DONALD PATERSON and Dr. J. C. SPENCE, on a Study of an Outbreak of Acute Rheumatism in Children under 12 Years. The paper appears in full in the present issue of THE LANCET.

During the course of the discussion the PRESIDENT said that he agreed with everything in the paper. An interesting question was why cases of acute rheumatism were so comparatively rare in private practice. Another feature of interest was the great infrequency of fatal hyperpyrexia in recent times. He agreed as to the importance of enucleation of the tonsils.

Dr. A. F. VOELCKER was also in total agreement with the paper. The relation of nodules to endo- and pericarditis was of great interest, and he thought that the two cases described by the authors of the paper, in which nodules occurred without either endo- or pericarditis, were very unusual. He could only remember two similar cases in the whole of his hospital experience. Before it could be said that a condition under observation was not rheumatic, considerable time must be allowed to elapse, because the rheumatic picture unfolded itself slowly. This ought especially to be remembered in cases of chorea. He would even go farther than the authors and venture to say that all chorea in children was rheumatic. He was impressed with the seasonal variation, and thought that the effects

of air-raids had been greatly over-estimated. A large number of cases of chorea appeared to occur in Hebrew children. He agreed with regard to the remissness of public health authorities in failing to recognise the gravity of rheumatism.

Dr. F. S. LANGMEAD agreed as to the importance of the tonsils as a channel of ingress of rheumatic infection in children, and said that out of nearly 2000 children whom he had examined from this point of view he had found that the tonsils had either been removed or were in such a condition that their removal was advisable on ordinary grounds four times as often in rheumatic children as in others. He asked whether any attempt had been made to plot out the incidence of the cases forming the outbreak, and said that Dr. F. C. Shrubsall had shown that there was an especial preponderance of rheumatic cases along water-courses, including buried rivers. He agreed as to the extreme importance of the subject from the point of view of public health, and stated that about a third of all the children in the physically defective schools in London were the victims of heart disease, resulting chiefly from rheumatic fever. Moreover, the mortality of those on the roll of such schools or within a few years of their leaving was much greater in the heart cases than in the other varieties of crippled children. The relatively greater importance which attached to the prevention of tubercle in the eyes of the public health authorities had led to the formation of open-air schools. It was therefore particularly necessary that the frequency and seriousness of rheumatism should be appreciated at the present time lest these schools, by treating the child of rheumatic parentage wrongly, should more than compensate for the good they might effect in the so-called pre-tuberculous child.

Dr. G. E. S. WARD read a paper on Some Disorders of the Myocardium, which was illustrated by the electro-cardiograph.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

AN ordinary meeting of this society was held on Nov. 19th at 1, Upper Montague-street, W.C., Lieutenant-Colonel F. E. FREMANTLE, M.P., the President, being in the chair.

Dr. C. W. HUTT, M.O.H., Richmond, read a paper on

Some Serious Defects in the Present Organisation of Health Services.

in which he dealt with numerous examples of the overlapping of authorities. He indicated that he did not desire to minimise what had been done in connexion with the Ministry of Health. One case of overlapping—viz., the division of the treatment of tuberculosis between sanitary authorities and insurance committees—would shortly be abolished by the National Insurance Act, 1920. There still remained the separate work of the Poor-law authorities in providing treatment in their infirmaries, most efficiently done in many cases. Dr. Hutt instanced the work and constitution of the Metropolitan Asylums Board, and also remarked that work which should properly belong to the sanitary authority and the M.O.H. was allocated to the education authority, the Home Office (factories and workshops), and the police (diseases of animals). Should not the M.O.H.'s and their society be consulted in regard to the proposed new factory service? In connexion with the conflict between county councils and the county districts, the M.O.H. of the local authority was the best judge of local needs and of the value of local private enterprise. Dr. Hutt spoke in favour of compulsory delegation to local authorities of many of the powers of county councils. He supported the formation of the Central Hospital Council proposed for London. He advocated that M.O.H.'s should become civil servants responsible only to the Government.

Dr. J. FENTON, M.O.H., Kensington, said that the system of local government in London was even more confused than the reader of the paper had indicated.—Dr. T. ORR, M.O.H., Ealing, opposed the suggestion that the M.O.H. should be a civil servant. It would stifle his originality and initiative and interfere with his freedom. The evils from overlapping of authorities he found could be overcome by manœuvre.

The PRESIDENT observed that the British system of government had grown up gradually according to the needs of the people, and was not lightly to be interfered with. During the war medical officers had been able to realise themselves and put their technical knowledge into practice with immense advantage; but in civil life the people to a great extent would insist on doing their best (or worst) for themselves. The M.O.H. could only advise. In the case of factory legislation there was great fear of unduly interfering with industry. If the M.O.H. were a State servant he might be regarded by the local authority as an enemy. The President advocated a system of promotion, transfer, and pensions for M.O.H.'s, and referred to the need for a codification of public health law.

Professor H. R. KENWOOD thought that to make the M.O.H. a civil servant would be almost a disaster. The present public health system had almost entirely originated from local initiative, for which the M.O.H. was largely responsible. They were getting quite enough direction and spoon-feeding already.—Dr. C. SANDERS, M.O.H., West Ham, spoke of the functions of Poor-law guardians.—Dr. A. H. BYGOTT, M.O.H., West Suffolk, referred to empty workhouses, &c., which could be used for public health purposes. He spoke favourably of the administration of the Anthrax Order in rural districts. He was against the nationalisation of M.O.H.'s, and said that under the present system those officers were often able to remove friction between the local and central authorities.

Dr. HUTT, in reply, said that he was impressed with the force of the criticisms which had just been made of the suggestion that M.O.H.'s should come directly under the Ministry of Health.

Thirty-four new members were elected at the meeting.

THE HARVEIAN SOCIETY.

AT a meeting of this society held on Nov. 18th, Dr. WILLIAM HILL presiding, Dr. SIDNEY PHILLIPS read a paper on

"*Carbuncles.*"

He defined a carbuncle as a gangrene of deep skin or deeper tissues due to a local invasion of pyogenic microbes. After referring in detail to the ætiology, symptoms, diagnosis, and prognosis of the disease, Dr. Phillips passed on to treatment, including plasters, painting, Bier's method of cupping, syringing, compression, the use of internal remedies, and, finally, operative measures. He considered operation to be advisable in the following circumstances: (1) When the sloughing process was very deep-seated, perhaps under the fascia, so that the inflammatory effusion, unable to reach the surface, extended laterally, accompanied by intense pain and marked pyrexia, with grave constitutional symptoms. (2) When the carbuncle, although not large, was deep-seated, and the slough touch and thick, so that even a small amount of pus was imprisoned. (3) In order to enlarge or throw together spontaneously formed openings in the skin, thereby assisting discharge and healing. (4) When one of the first conditions had led to opening a carbuncle by operation it was well to apply pure carbolic acid at the same time; but it was not desirable to incise a carbuncle which was progressing favourably in order to use carbolic acid.

Mr. E. M. CORNER said that he had always been struck by the great varieties of treatments and symptoms mentioned in the text-books, but as the condition was as common in the debilitated as in the healthy, different forms of treatment were applicable. In the latest text-books surgical treatment was advised, as it shortened the time of recovery. He advised various forms according to the class of case. Small carbuncles in their early stages could be excised, but on no account should the wound be sewn up, or suppuration would

follow in every stitch-hole. Incision and removal of the slough should be confined to those cases with marked septicæmic symptoms, and in them was satisfactory. A series of selected cases treated with the old savin ointment of the Pharmacopœia seemed to do just as well as those treated by surgical methods. Since the pain and general symptoms were undoubtedly due to tension, these could be relieved by giving a general anæsthetic and stabbing the infected area with a thin scalpel or tenotome in perhaps 50 places. He considered that the hope of the future lay with the bacteriologist, and, perhaps, in sero-bacterins, we should eventually find the ideal treatment. He had always found that recurrences were more common in patients past the prime of life.

Dr. ALEXANDER FLEMING said that the condition was due to the staphylococcus causing a patch of necrosis, and only the resistance of the patient determined whether a pimple, a boil, or a carbuncle resulted. The obvious procedure, then, was to raise the resistance by vaccines and to bring as many leucocytes to the part as possible by fomentation. He had found antiseptics were quite useless for actually killing organisms, but some of them had the effect of increasing the flow of lymph to the part. Of the very large numbers of cases treated at St. Mary's with vaccines, he thought, on the whole, that the treatment was beneficial, judging by the infrequency of recurrences, though there were some cases in which they failed entirely. It was not reasonable to expect a vaccine to heal a boil, because it cannot possibly influence the patch of necrosis which accompanies it.

The PRESIDENT was convinced from personal experience that the primary seat was sometimes subcutaneous and sometimes cutaneous. He advised in early cases the application of heat, preferably dry, to avoid the sodden condition of the skin produced by fomentations, and, where there were much tension and a rise of temperature, incision.—Dr. P. MONTAGUE SMITH gave a warning with regard to painting with iodine or collodion, and said that the right treatment was free incision—not excision—under a general (never a local) anæsthetic. Early use of vaccines was unquestionably beneficial. He was sure that carbuncles were always cutaneous and never subcutaneous.—Dr. E. H. BARRETT considered the best treatment was the relief of tension by incision, fomentations, and heavy Bier's cupping. He advised vaccines, which sometimes cured carbuncles, in large doses before discharge took place, and subsequently in small frequently-repeated doses.—Dr. W. H. WILLCOX was impressed by the frequency of some concurrent intestinal condition, and advised examination of stools in all cases. He agreed with previous speakers as regards treatment.—Dr. E. G. GRAHAM LITTLE advised hypertonic salt solution, cupping, and painting the surrounding skin with weak iodine. Vaccines, in his opinion, did not cure, but should be continued for many months to prevent recurrence.—Dr. E. LE F. PAYNE recommended incision, scraping, and plugging with dry gauze under gas; this method gave immediate relief to pain and constitutional symptoms.—Dr. G. DE B. TURTLE mentioned the frequency of previous worry and sleeplessness in patients suffering from carbuncle, and advised change of air and scene.—Dr. CAMPBELL WILLIAMS advocated the use of staphylococcal serum given by the rectum as being as beneficial as vaccines.—Dr. PHILLIPS and Mr. CORNER replied shortly.

CARDIFF MEDICAL SOCIETY.

A MEETING of this society was held on Nov. 9th, when Mr. J. O. D. Wade showed a case of gangrene of the foot in a child aged 5 years. The gangrene, of five days' duration, extended above the ankle with a well-defined margin; there were no abnormal heart signs nor previous history of injury or infection. The diagnosis was discussed by Mr. R. Eccles Smith and Dr. R. Prichard. Embolism, scarlet fever, and Raynaud's disease were considered. Dr. Owen Rhys showed skiagrams of a case of aneurysm with a history of syphilis, the only sign being a pulsating tumour, the size of a plum, coming through the manubrium sterni. The skiagrams were taken in the prone and dorsal positions. Mr. A. W. Sheen read a paper on the End Results of Colectomy.

BRITISH ORTHOPÆDIC ASSOCIATION: ANNUAL MEETING.

THE annual meeting of this association was held at the rooms of the Medical Society of London on Friday, Nov. 12th, under the presidency of Sir ROBERT JONES. On Saturday members witnessed operations at St. Bartholomew's Hospital, and later they visited the Orthopædic Hospital at Carshalton.

Presidential Address.

The PRESIDENT, in the course of his opening address, congratulated the association on its ever-increasing vitality. Its potentialities were unlimited, and their realisation depended largely on the enthusiasm of the younger members. He would not dwell on the services of orthopædic surgery to the injured in the war, nor on the services of the war to the orthopædic surgeon, as these had been generously acknowledged. There was now a better understanding between the general surgeon and the orthopædic surgeon; the latter should no longer regard himself as belonging to a separate cult and claiming special perfection. The character of his work would remain the sole criterion of its value. They were aware that an operation was but an incident in the treatment of a case and that success largely depended upon after-care. The orthopædic surgeon must primarily have a thorough working knowledge of general surgery and must be cognisant of its advances. He should be a master of detail, but never governed by it; function must always be his goal. There was a need for well-trained men who were prepared to devote themselves to orthopædic work and to take their places on the staffs of all our general hospitals. On the other hand, the orthopædic departments must be fully equipped and adequately staffed. A great defect in our large general hospitals was the system whereby a surgeon was expected to treat equally well cases in regard to which he was an acknowledged master and cases which did not interest him; there was urgent need to remedy this. A surgeon of high repute on the brain was only too pleased to hand over a case of hæmorrhoids and accept one of pituitary tumour.

The President proceeded to set out how, in his opinion, an orthopædic department in a general hospital should be organised, and to elaborate his ideas in favour of country open-air hospitals for children, such as those at Heswall, Ruislip, and Harrow, in which one side of the shed was absent, whatever the weather. In these there had been no instance of "catching cold" or pneumonia. At Baschurch the principle was extended to soldiers, and the healing of wounds here was more rapid than at any other place he knew of. There still existed a large number of avoidable deformities, but this defect could be overcome by organisation and efficient training. What, he asked, ought to be done to facilitate teaching? The student was more receptive of orthopædic training towards the end of his curriculum than earlier; but in any case his attendance should be compulsory at a certain number of sessions. During, say, 20 occasions every variety of case should be demonstrated and opportunities should be given him to do practical work. Specially should he be taught the principles underlying the prevention and correction of deformities, and be made familiar with the uses of plaster-of-Paris. Such institutions as the Royal National Orthopædic and the Shepherd's Bush Hospitals should be equipped for the training of the post-graduate. Short courses for the practitioner should be organised. Higher courses should also be provided for those who wished to become efficient orthopædic surgeons. The University of Liverpool, on the initiative of Professor J. G. Adami, was about to consider such a scheme. He suggested that the orthopædic surgeons attached to teaching hospitals should be granted a lectureship. Success of an orthopædic department depended on the personality as well as on the efficiency of the surgeon; friendships and discussions with the staff would make for higher education. He concluded by a grateful

recognition of the four years' association of King Manuel with the Shepherd's Bush Hospital.

The following were elected honorary members: Sir Berkeley Moynihan, Sir John Lynn Thomas, and Professor J. Marnoch (Aberdeen); and as corresponding members, Dr. Royle Whitman (New York) and Dr. Jacques Calvé (Berck and Paris).

A discussion took place on the subject of

The Operative Treatment of Osteoarthritis of the Hip-joint.

Mr. D. MCCRAE AITKEN, in introducing the subject, pointed out that the condition before and after operation must necessarily be included in the consideration. In the past the use of the knife in orthopædic practice was held to indicate the failure in the particular case of mechanical effort. At present the tendency to rush to operation in these days of asepsis and improved technique must be guarded against; every care should first be expended on preliminary treatment. The real metier of the orthopædic surgeon must always be restoration of function. Attention must be paid to what the patient complained of and what were the probabilities of recurrence after the treatment, owing to the continual action of some of the accessory causes, either mechanical or infective. He proceeded to deal with the following points: stiffness, stiffness in a bad position, pain, and later with the various methods of treatment—operative and manipulative.

The following took part in the discussion: Mr. J. B. MENNELL, Mr. W. E. BENNETT, Mr. HARRY PLATT, Mr. N. DUNN, Mr. S. ALWYN SMITH, Mr. R. C. ELMSLIE, Mr. J. ADAMS (Boston, U.S.A.), Mr. A. B. MITCHELL (Belfast), Professor CALVÉ, Mr. A. H. TUBBY, Mr. HEY GROVES, Mr. BLUNDELL BANKART, Mr. H. A. T. FAIRBANK, and the PRESIDENT.—Mr. AITKEN replied.

In the afternoon several subjects were discussed. Mr. G. MURRAY LEVICK read a communication entitled "The Electrical Treatment of the Foot." The author's position was to advocate electrical treatment only as a preliminary to voluntary exercises, never with the idea of its substitution for exercise. By commencing efforts to get voluntary movements when a muscle was much wasted needless delay was caused in comparison with the method of electrical toning up as a preliminary. The paper was discussed by Mr. AITKEN and Mr. ELMSLIE.—Mr. S. ALWYN SMITH read a paper on Fractures Occurring in Bone-grafts, and this led to a long discussion.—Mr. R. OLLERENSHAW opened a discussion on Cysts of the External Semilunar Cartilage, and Mr. J. A. DICKSON on the Treatment of Stiff Metacarpo-Phalangeal Joints.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.

AT a meeting held on Nov. 4th Dr. Alexander Orlebar read a paper on

Scopolamine-Morphine Narcosis in Child-Birth,

based on an experience of 11 years and 100 cases. He had obtained excellent results by following out strictly the details as originally laid down by Gauss, the crux of the whole business being the memory test, upon the successful testing and estimation of which hung the whole success of the method. For this the personality of the patient must be gauged. The results ought to be produced with the smallest possible quantity of scopolamine, no two women being quite alike in their response to the drug. With careful dosage the ideal state of amnesia could be obtained, and the "memory islands" of Gauss avoided. He had never given more than five 1/200 gr. injections of scopolamine, and had usually found three sufficient. Not more than one injection of morphia should be given. At the end of the second stage, the most painful part of labour, it was his custom to give a whiff of chloroform. He had also found at that period the pressure of a pledget of cotton-wool soaked in 2 per cent. novocain useful in preventing perineal tear. He had had but one stillbirth, and then the cord was tight round the neck. A certain number of the children were oligopnœic, but all recovered when kept warm and otherwise left alone. He did not approve of cutting the umbilical cord early. The absence of post-partum shock he had found the most striking feature of the treatment. A general discussion followed in which the President, Mr. Hugh Stott, and eight members took part.

Reviews and Notices of Books.

MEDICINE.

1. *A Synopsis of Medicine.* By HENRY LETHEBY TIDY, M.A., M.D., B.Ch. Oxon., F.R.C.P. Lond., Assistant Physician to St. Thomas's Hospital; Physician to the Great Northern Central Hospital. Bristol: John Wright and Sons, Ltd. 1920. Pp. 952. 25*s*.

2. *Manual of Medicine.* Second edition. By A. S. WOODWARK, C.M.G., C.B.E., M.D., F.R.C.P., Senior Assistant Physician, Lecturer on Medicine, and Dean of the Medical School, Westminster Hospital; late Colonel, A.M.S., Consulting Physician to the Forces, and Deputy Assistant Director-General. London: Henry Frowde and Hodder and Stoughton. 1920. Pp. 487. 16*s*.

3. *Elements of Practical Medicine.* Eleventh edition. By ALFRED H. CARTER, M.D., M.Sc., late Professor of Medicine, University of Birmingham. Revised by ALEXANDER G. GIBSON, M.A., D.M. Oxon., F.R.C.P. Lond., Lecturer in Morbid Anatomy in the University of Oxford; Physician to the Radcliffe Infirmary and County Hospital, Oxford. London: H. K. Lewis and Co., Ltd. 1920. Pp. 695. 16*s*.

1. THIS "Synopsis of Medicine" aims at providing an epitome of the salient facts in medical practice, and a study of the contents makes it clear that the writer has scored a success. The general arrangement is that adopted by the late Sir William Osler in his "Principles and Practice of Medicine," but in the method of presentation the author has followed the lines of Hey Groves's "Synopsis of Surgery," to which this publication has been planned as a companion volume. It is frequently urged that a synopsis is merely a "cram" book. This charge can scarcely be levelled in good faith against Dr. Tidy's work. Whoever heard of a "cram," book of over 900 pages? The book will prove useful to the student in revising his knowledge, to the general practitioner from the convenience which the arrangement of type and indented margins afford for rapid reference, and to the lecturer imparting systematic instruction in ensuring the omission of no important heading. A great amount of time and trouble must have been spent in the preparation of the synopsis, and much recent work is included in the survey. Indicating the up-to-date character of the book we may cite the inclusion of the different types of pneumococci as worked out in the laboratories of the Rockefeller Institute, Gordon's four types of meningococci, Turban's classification of pulmonary tuberculosis, the treatment of bilharziasis by intravenous injections of tartar emetic. Due notice is taken of the findings of chemical pathology, as exemplified in the sections devoted to the consideration of gout, diabetes, nephritis, and the deficiency diseases. We fail to find any notice of Vincent's angina and of the treatment of ulcerative colitis, while the short section dealing with encephalitis lethargica might well be amplified in any future edition. After all, these are minor shortcomings, and we can say without hesitation that the book under review is far ahead of any medical synopsis that it has been our lot to encounter. As in Osler's "Principles and Practice of Medicine," diseases of the nervous system are included, and also many of the more important tropical diseases, but diseases of the skin are not considered, except as complications of other disorders.

2. In bringing out a second edition of his "Manual of Medicine" Dr. Woodwark has incorporated much new material. In part this deals with conditions brought into prominence during the war, such as war neuroses and trench fever, in part with advances in general medical knowledge. The book, which is on elementary lines, is intended to serve as a vade-mecum to the student clerking in the wards or out-patient department, and as a convenient synopsis of the salient facts of medicine for the busy practitioner. It is made up of a series of short summaries, in which the causes, symptoms, diagnosis, and treatment of the disease

under consideration are clearly and briefly set out. It is of necessity concise and dogmatic and tabular classifications are made use of. The subject matter is arranged under the various anatomical systems of the body, but under each system the alphabetic arrangement is more or less closely followed in order to facilitate reference. A small section is devoted to a consideration of insanity, in which will be found particulars relating to the certification of lunatics as well as a short review of the chief characteristics of mental disorder. Several diagrams of use to the student are incorporated in the section dealing with diseases of the nervous system. We notice the inclusion of Joslin's dietary in diabetes, the use of atophan in the treatment of an acute attack of gout, the luetin reaction in the diagnosis of syphilis; reference is made to Besredka's sensitised vaccines and to the detoxicated vaccines introduced by Thompson. The book is already well known to London medical students, and while new material has been incorporated the original character and size of the book have been preserved.

3. The first edition of this well-known text-book on the elements of practical medicine appeared about 40 years ago. Its author died in 1918, and the necessary revision for the present issue has been undertaken by Dr. Alexander Gibson. We are glad to see the inclusion of the short biographical account of Alfred Carter, forming as it does a sort of friendly introduction to that which follows. From this we learn that the "Elements of Medicine" took origin in the notes which Carter was in the habit of giving to students when coaching them privately for examinations, and that it subsequently became his life work and embodied his experience and teaching while physician to the Queen's Hospital, Birmingham, and professor of medicine in the University. The book is too well known to need detailed description. It provides a safe guide to clinical medicine and possesses the merit of simplicity. The reviser has not altered the plan of the book, but, where modern knowledge has demanded it, portions have been omitted to make room for new matter. In this way the size of the book remains unaffected. Such light as the war has thrown on our knowledge of certain diseases has been incorporated when it comes within the scope of the book. The difficulty of keeping this work within the prescribed limits may account for one or two noticeable omissions. We find no mention, for instance, of vaccine therapy in the paragraph dealing with cases of bacilluria which have failed to respond to drugs. In the chapter devoted to the consideration of diseases of the ductless glands we find no reference to acromegaly, nor, indeed, to pituitary disease of any kind. It is only fair to say that the successful injection of pituitary extract in some cases of diabetes insipidus is recorded. Thirty-two pages are devoted to a short but succinct consideration of the chief diseases of the skin. Several new prescriptions appear in the Therapeutic Index which is appended. The book is well deserving of the wide circulation that it has obtained.

SURGICAL PATHOLOGY AND MORBID ANATOMY.

Seventh edition. By Sir ANTHONY A. BOWLBY and Sir FREDERICK W. ANDREWES. London: J. and A. Churchill. 1920. With 210 illustrations. Pp. 651. 30s.

SINCE a knowledge of disease processes is, or should be, the basis of all clinical practice, the importance of pathology in the medical student's curriculum can scarcely be overrated. Unfortunately, however, both in medicine and surgery knowledge has necessarily been outstripped by practice The boundaries of pathology have been enormously increased, but it is still an unstable science, and the student must perforce devote the greater part of his time to the development of a clinical sense, and the acquirement of methods of surgical technique. It has long been necessary to select for his consumption a suitable modicum of established facts from chemistry, physics, and biology, and unwilling though we may be to acknowledge it, we are compelled to resort to a similar selection in pathology. It is no longer possible to linger in contemplation of the broader aspects of inflammation, immunity, or tumour formation; it is an age of specialisation, hence the need for text-books on medical and surgical pathology.

Six previous editions bear witness to the success with which this text-book has fulfilled a genuine need. It is pleasantly written, easy to read, and contains all that one preparing for a surgical examination could possibly want. The combination of a surgeon and a pathologist is the ideal one for the production of a book of this type, and the joint result of the labour is a happy indication of what may be expected from a closer coöperation between the various branches of medical science.

In this edition new sections have been added on gas gangrene, shock, and tetanus. But the most notable change is in the illustrations; the old figures, which were quite unworthy of the text, have been replaced by new drawings, and the value of the book is enormously increased thereby.

SHELL-SHOCK AND OTHER NEUROPSYCHIATRIC PROBLEMS.

Presented in 589 Case Histories from the War Literature, 1914–18. By E. E. SOUTHARD, M.D., Sc.D., Bullard Professor of Neuropathology, Harvard Medical School, &c. With a Bibliography by NORMAN FENTON, S.B., A.M., and an Introduction by CHARLES K. MILLS, M.D., LL.D., Emeritus Professor of Neurology, University of Pennsylvania. Boston: W. M. Leonard; London: Stanley Phillips. 1920. Pp. 1004. 60s.

POSSIBLY none of his other work, minute, painstaking, and highly original though it is, gives a better idea of the loss American neurology has sustained by the lamented death of Professor Southard than this compilation, which runs to over a thousand pages. Some conception of the immensity of the task may be gained from the fact, incidentally mentioned in the preface, that Professor Southard himself dictated, re-dictated, and condensed all the cases from the originals. Each case occupies on an average from one to two pages, and nearly all are accompanied by useful comments on their significance and on the points they illustrate. Never in any sense lost in the midst of this overwhelming material, the author groups, divides, and subdivides with conspicuous clarity; cross-references facilitate handling, while headings, and on occasion whole pages, are devoted to summaries of salient features. The bibliography occupies no less than 77 pages, and the index 21. There are also a number of plates.

In addition, Professor Southard gives some 100 pages of an "Epicrisis," in which he reviews his facts, and provides a masterly study in synthesis, with sections on the nature, diagnosis, and treatment of the neuroses of war. Enough has already been said to indicate the documentary value of the work, which includes the most important cases from English, French, Italian, German, Austrian, and Russian medical records; but to have this enormous material analysed by one who was conversant with both nervous and mental disease makes readable and practically useful what might otherwise have degenerated into a mass of data too voluminous for the ordinary mind to digest. The volume is a storehouse of information, and has a place by itself in the literature of the psychoneuroses of warfare.

THE PROBLEM OF NERVOUS BREAKDOWN.

By EDWIN LANCELOT ASH, M.D. London: Mills and Boon. 1920. Pp. 299. 10s. 6d.

IT seems as natural for the psychotherapist to write a book on psychotherapy as for the surgeon to invent a new or modify an old instrument. Novelty in material or in presentation is, perhaps, not always to be expected, and, no doubt, there is something to be said for iteration, if the medical public is not alive to all that is meant by psychotherapy. Dr. Ash's book contains much that is admirable in theory and in practice; for example, his chapters on the rest cure, on diet, and on recreation, are full of sound precept, patently based on actual experience. On perusal, none the less, one is aware of a general lack of conciseness and compactness. There are many "little books" on psychotherapy, the majority of which outline without analysing present-day views often of a conflicting sort, while there is room for a

survey of the whole subject, theoretical and practical, where ripe individual experience, as in Dr. Ash's case, would serve a useful purpose; tedious repetition of psychological commonplaces is to be deplored.

HYPNOTISM AND TREATMENT BY SUGGESTION.

Third and enlarged edition. By ALBERT E. DAVIS, F.R.C.S. Edin., Honorary Physician to the Liverpool Psychotherapeutic Clinic. Liverpool: The Liverpool Booksellers Company, Ltd.; London: Simpkin, Marshall, and Co. 1920. Pp. 202. 5s.

THE first part of this small volume contains an elementary exposition, in simple and popular language, of accepted psychological and psychotherapeutic facts, presumably for the general reader. The second division is taken up with brief accounts of the success of psychotherapeutic methods, in the author's experience, in conditions ranging from angina pectoris to shingles, and from stage-fright to obesity. We fear the neurologist will not substantiate Dr. Davis's contention that shingles is a functional nervous affection, or that chorea is a functional brain disorder. The details he gives of his most pronounced case suggest it was not one of chorea at all. Speaking generally, the narratives of his cases are too sketchy to serve any useful purpose, and bald statements such as "in a case of early locomotor ataxia sent to me recently, I succeeded in effecting a complete cure," are positively misleading. One of the urgent needs of the present time is a critical examination of the actual results of psychotherapy, since its claims are becoming increasingly grandiose; its value will not be diminished if some of its exponents temper their enthusiasm with the critical spirit.

MIND AND WORK.

By C. S. MYERS. London: University of London Press, Ltd. 1920. Pp. 204. 6s.

"So built we the wall ..... for the people had a mind to work."

MANY pay verbal tribute to the saying that mind governs matter, but few venture within the land of psychology to study how this takes place, since they have heard of the existence there of a tribe of uncouth terminology, fearsome to comprehend. We have now before us a book written for those who live without by one who lives within; it deals with psychological factors in industry and commerce, and is presented in words which he who runs may read and understand. No one who is not deeply versed in a subject can make it appear simple. By this test Professor C. S. Myers clearly knows well that of which he writes. He sets forth the principles of motion study and tells of its value for increasing output and earnings while decreasing fatigue; many instances are given to prove that through intelligent study of methods and movements costs may be lowered and production raised. The worker, whose efficiency is of value not merely to himself but to the community, requires skilled instruction and training far more than does the athlete who places himself under professional guidance in order to perfect his efficiency at some game. But action on these lines can only be taken with the full consent and coöperation of the worker, who can no longer be considered a piece of machinery; he possesses a mind.

The description of how fatigue, mental and bodily, occurs is one of the best chapters in the book. The nature of fatigue is discussed and the various methods for estimating its existence. The effect of different influences, such as rest pauses, improved environmental conditions in relation to lighting, ventilation, and temperature, and reduced hours of work, in postponing fatigué and maintaining efficiency, is dealt with. Special reference is made to the occurrence of neurasthenia in dangerous trades, especially among coalminers; "of the cases of nervous breakdown occurring during the late war, a disproportionately large percentage was found among soldiers who had been miners." The author points out the value of vocational selection—i.e., the fitting of round pegs into round holes—for reducing the financial burden of labour turnover, and makes out an excellent case for the necessity of training experts to carry out the work of selection. Methods of selection and the importance of different tests to ascertain ability are described; in so far as selection has regard to physical attributes medical aid is essential. Many who are accustomed to consider that restriction of output is the special prerogative of labour, may see fit to alter their opinion after perusal of what Professor Myers has written on this subject and conclude that the fault more often lies with employers, who lessen production, either consciously, for economic reasons, or unconsciously, through bad organisation. A chapter of much interest is that devoted to systems of payment as providing incentives to work. Here, clearly, the influence of mind over action is paramount. Many wage systems fail for lack of understanding the psychology of those whom it is desired to incite; others are but disguised methods of slave-driving. Approval is expressed of profit-sharing and copartnership between capital and labour, but entire confidence must exist between both parties for success to follow. To-day each suspects the other.

A discussion of the influence exerted by the various factors already alluded to upon industrial unrest closes the book. Each of these factors, in addition to home conditions, tends to produce worries; "worries produce their effect especially when sown on a favourable soil. This soil has been called 'the psychopathic disposition,' an innate tendency to mental instability, sensitivity and discomfort, and to erratic mental development." From such sources spring discord and strikes. This book is written by one who stands without and looks dispassionately upon capital and labour. His opinion cannot be disregarded. We hope that it will be read, not only by his medical confrères but by the much larger public of the industrial world. The nation has an industrial wall to build and must develop a mind to work.

PRACTICAL HISTOLOGY FOR MEDICAL STUDENTS.

By D. T. HARRIS, M.B., B.S., B.Sc., Senior Assistant and Sharpey Scholar in Physiology, University College, London. London: Langley and Sons, Ltd. 1920. Pp. 34, interleaved.

SHORT descriptions are given of over 200 microscopic sections of the various organs of the body, with a page or two of details about the microscope, cleaning slides, and microscopic stains. Blank interleaved pages with six circles, about the diameter of an ordinary watch glass, on each page are intended for the sketches of the preparations by the student. The course seems to bear a similarity to that given in some other institutions. It will prove useful for students supplied with the corresponding slides.

JOURNALS.

Journal of Hygiene. October, 1920. Vol. XIX., No. 2. Edited by G. H. F. NUTTALL, F.R.S. 12s. 6d. net.—An article of 71 pages, by G. S. Graham-Smith, on the Behaviour of Bacteria in Fluid Cultures as Indicated by Daily Estimates of the Numbers of Living Organisms must be read in the original to appreciate the vast amount of work upon which several pages of conclusions of practical importance are based. Previous writers on the same subject have confined their examinations of the numbers of micro-organisms, under regulated conditions, to the early periods of culture; Dr. Graham-Smith completes the research on the subject, which has been going on for some 30 years, by estimating the numbers of organisms in fluid media after 24 hours and longer of cultivation. His conclusions are what one would expect from consideration of previous work; they are rendered interesting by speculations upon their bearing on some of the phenomena observed in infective diseases.—The Conversion of Air into a Lethal Mixture of Gases by Storage of Tobacco and other Vegetable Substances, by R. C. Frederick. The author shows that when damp tobacco, hay, or potatoes are stored in unventilated spaces the air is rendered poisonous by an enormous increase in the proportion of CO_2. The change is not due to moulds or micro-organisms, nor to any material which may be added in the course of manufacture. The practical conclusion is obvious: damp vegetable material must be stored only in thoroughly ventilated chambers.—Blackwater Fever, by L. S. Dudgeon. This article gives a complete account of the pathological conditions found in blackwater fever, and details an experimental investigation into the causation of the disease. From alcoholic and acetone extracts

of the dried residue of urine obtained during the period of hæmoglobinuria, and from dried organs, active hæmolytic substances were obtained. No evidence was found to show that quinine influences the progress of the disease.

British Journal of Experimental Pathology. October, 1920. Vol. I., No. 5. Editors: C. H. BROWNING, C. L. EVANS, P. FILDES, W. E. GYE, E. L. KENNAWAY, E. H. KETTLE, J. MCINTOSH, J. A. MURRAY, W. J. TULLOCH, and C. M. WILSON. London: H. K. Lewis and Co., Ltd. 7*s.* 6*d.* net.—The Value of Simultaneous Testing for the Wassermann Reaction with Two Different Antigens and the Ice-box Method, by T. J. Mackie and C. C. Rowland. The authors show that the sensitiveness of the reaction can be increased in early primary and treated cases—that is, that a proportion of weakly positive results can be detected by testing simultaneously with a liver-lecithin plus cholesterol antigen and a heart-extract plus cholesterol antigen. The ice-box method has no advantages over the usual procedure.—Variations in the Benzidine Peroxidase Reaction Depending on Fixative, Physiological Activity and Type of Animal, by M. L. Menten. This article, which comes from the Pathological Laboratories of the University of Pittsburgh, deals with a subject which has assumed considerable importance in the last few years. The author used Graham's benzidine peroxidase reagent—namely, 0·5 per cent. benzidine in 75 per cent. alcohol, plus 0·2 per cent. hydrogen peroxide. It was found that this reagent produces a yellow-brown colour in the granules of myelogenous cells in human blood, and is diagnostic for man. In the blood of the lower animals studied only a small percentage of the polymorphonuclear leucocytes develop the characteristic yellow colour, and these are probably eosinophils. When hydrogen peroxide is excluded from the reagent practically all the myelogenous cells of the lower animals give a coloured granular reaction. By varying the concentration of the alcohol a series of colours ranging from deep brown to blue may be obtained in granules in human pus.—Researches on Dysentery, by F. W. Twort. The author shows that three types of special forms may be isolated from dysentery and allied bacilli. Type A shows moderately thick but long bacilli, which may twist like a spirochæte. Type B shows long thick rods, and these may open and set free granules. Type C are like Type B, but shorter. There are many granules and round forms, and also thick branching units. A filter-passing dissolving material may be present in cultures of dysentery bacilli which breaks down the bacilli into granules. (In this connexion the reader's attention may be drawn to the work of d'Herelle and Bordet, published in the *Comptes Rendus de la Société de Biologie.*) Dr. Twort does not believe that the special forms of dysentery bacilli described represent stages in a true life-cycle, since the normal type is not produced in rotation: it is doubtful if they are mutations.—The Respiratory Exchange of Surviving Mouse Tissues, Normal and Neoplastic, by B. R. G. Russell and W. H. Woglom. Respiratory quotients for surviving tissues were obtained by a method similar to that introduced by Krogh. The results obtained were very consistent. Greater variability was found in tumours than in normal tissue. The authors draw the tentative conclusion that the more rapidly growing, undifferentiated tumours draw their energy from carbohydrates, the more slowly growing from fats.—Transmission of Experimental Encephalitis Lethargica in Series in Monkeys and Rabbits, with Notes on a Spontaneous Infection in a Monkey, by J. McIntosh. The experiments described in this paper complete the proof necessary to show that the disease is caused by a living virus.

Archivos de Medicina, Cirugia y Especialidades.—We have received the first number of this new Spanish medical journal, which will appear fortnightly. The object it sets itself is, in the words of an editorial introduction to this first number, "to give, periodically, an account of all articles of interest appearing in the medical press of the entire world." With this object 500 medical periodicals from all parts of the world are to come under review. Beginning with January, 1921, the *Archivos* will publish, as an appendix, a bibliographical index giving the titles of all original articles appearing in the 500 periodicals reviewed, with Spanish translations of the titles and such details as are necessary to facilitate the procuring of the originals. Each quarter will complete a volume and, on the completion of each volume, a fully classified subject-index relating to the articles that have appeared in the *Archivos* during the quarter and a bibliographical index embodying, in classified form, the material of the three months' fortnightly indices, will be sent to each subscriber. If the work is well carried out there can be no doubt of the usefulness of a periodical of this kind. The present number promises well; it contains 40 abstracts and an original article on the present condition of the question of aphasia, in which due weight is given to Head's work. The abstracts are signed and their interest and readability are much enhanced by the fact that they are not mere précis, but that each is a combination of a summary and an expert review.

Reports and Analytical Records
FROM
THE LANCET LABORATORY.

TUBINIC PREPARATIONS.

(HOFFMANN-LA ROCHE CHEMICAL WORKS, LTD. (BASLE), 7 AND 8, IDOL-LANE, LONDON, E.C.)

AN extended series of solutions (chiefly alkaloids) are supplied for use with the ampoule syringe recently introduced by the above firm. The convenience of having at hand solution, ampoule, syringe, and needle in one piece seems obvious. The design is neat and ingenious, the complete instrument being only 2¾ inches in length. Hypodermic medication is not only facilitated by this invention, but an accurate dosage is ensured.

VACCINEURINE.

(R. SUMNER AND CO., LTD., 40, HANOVER-STREET, LIVERPOOL.)

This preparation is supplied from the Swiss Serum and Vaccine Institute, Berne, and is described as a mixture of the vaccines of several bacteriological organisms. The suggestion is that the mixed vaccine of these autolytic bacteria is inimical to the organisms assumed to be responsible for attacks of neuritis. The mixed vaccine is based on growths from *Bacillus prodigiosus* and a number of streptococci. Claims are made in favour of its employment by intramuscular injection in the gluteal region in relieving chiefly neuritis and sciatica and general neuralgic conditions except those of hysteric origin.

BYNOTONE.

(ALLEN AND HANBURYS, LTD., 37, LOMBARD-STREET, LONDON, E.C.)

The biological researches connected with the accessory food factors were calculated sooner or later to attract the attention of the manufacturer, and "bynotone" is an example of an attempt to present these factors in palatable and convenient form. It is described as a combination of bone marrow and yeast-nuclein, hæmoglobin, and malt extract. It is practically a dry preparation, scaly in appearance, and of a coffee colour. It contains 12 per cent. of marrow fat in an emulsified form. We have confirmed the presence of the constituents enumerated, and care is evidently taken to reduce them to a dry powder at a temperature which does not impair their activity. Clinical results will, no doubt, be forthcoming as to the actual biological value of this new and interesting product.

SOLOID NEUTRAL RED.

(BURROUGHS, WELLCOME AND CO., SNOW HILL BLDGS., LONDON.)

The point about the above product is its great convenience in use, which bacteriologists and medical practitioners will appreciate. Neutral red is essential for Gram's well-known stain, and particularly, as is pointed out, for Jensen's modification of it, as recommended by the Medical Research Council, and also for Neisser's stain. Each soloid neutral red contains 0·1 g., so that one placed in 10 c.cm. of solvent gives a 1 per cent. solution, the strength chiefly used.

ANASARCIN.

(ANASARCIN CHEMICAL CO., 22, GREAT RUSSELL-ST., LONDON, W.C.)

The formula of this preparation (in one tablet) is disclosed as follows: scillipicridin, gr. ¼; scillitoxin, gr. $\frac{1}{100}$; oxydendron arboreum, gr. ¾; and sambucus canadensis, gr. ¾. The claim is made that this combination with squill active constituents effectively replaces digitalis in the treatment of cardiac trouble. It is said to promote diuresis and to be without cumulative or toxic effects. The evidence on these points does not so far appear to be overwhelming.

PEARS' UNSCENTED TRANSPARENT SOAP.

(A. AND F. PEARS, LTD., 71-75, NEW OXFORD-ST., LONDON, W.C.)

The medical view of soap is that it should be as far as possible neutral while satisfactorily detergent. Pears' transparent soap complies with this standard. It is unirritating to the delicate skin, and shows absolutely no free alkali. Its complete solubility in alcohol is evidence of its purity. It is described as matured, which we take to mean that it contains a minimum of water, according to our examination.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 27, 1920.

A Broad Conception of Medical Research.

As the first recipient of the Royal Society of Medicine's gold medal, generously endowed by a Fellow who prefers to remain anonymous, Sir A. E. WRIGHT appropriately gave an address on Medical Research on Armistice day. This subject has, of course, been much discussed in connexion with medical reconstruction, notably by Sir JAMES MACKENZIE, who referred again to it in an inaugural lecture on Oct. 19th at Glasgow,[1] and by Sir GEORGE NEWMAN in his well-known reports. These three authorities may fairly be taken as spokesmen of the laboratory, the clinical, and the educational points of view. While as an onlooker the last named is in a better position to survey the whole field in proper perspective, it must not be imagined that the laboratory and clinical standpoints are incompatible or mutually exclusive. Sir GEORGE NEWMAN pointed out that all sound clinical work *is* research and pleaded for a more intimate association between the workers in the laboratory and those in the wards; and though Sir A. E. WRIGHT and Sir JAMES MACKENZIE clearly see the weak points of research restricted to the wards or to the laboratory respectively, it is obvious that the two methods are essential, and that they are complementary to each other. Both these teachers emphasise the importance of securing sound first principles for the organisation of research so as to ensure orderly, systematic, and successful results.

In a recent address at the Victoria Infirmary, Glasgow, Sir JAMES MACKENZIE, who admitted that as the outcome of clinical experience he regarded research from an aspect different from that of those specifically engaged upon it, described the following as the guiding principles of medical research: the recognition of the onset of disease with all the circumstances, and careful observation of the symptoms, which should then be arranged into groups, so that a disease can be separated from others superficially alike or previously regarded as identical. Thus clinical methods first prepared the way and defined the problem of malaria, which by special methods the bacteriologist then solved and so achieved one of the most brilliant successes in the annals of medicine, particularly in its most important bearing—that of prevention. Although malaria may, as Sir JAMES MACKENZIE points out, be an exceptional instance, it admirably illustrates the manner in which these two forms of research should be combined, and Sir A. E. WRIGHT appears to endorse the underlying principle. He insisted that isolated observations are easily made and accumulated, but that the difficulty lies in arriving at solid generalisations. Although most men flatter themselves that they have this gift, it is really an attribute of superior intellect, such as that of the late Sir WILLIAM JENNER, who differentiated typhus from enteric fever. Such generalisations are of slow growth, and, as it seems safe to estimate that four out of every five are incorrect, it is most important that they should be carefully verified. This is the function of the research worker and it should be done by means of experiment; although everyone is convinced that he is equally fitted both to form and to test generalisations, it is the skilled laboratory man to whom this duty should be allotted, in preference to the clinician, the statistician, or others. To ensure efficiency, this researcher must be specially trained, provided with a permanent post in a laboratory close to a hospital, and be a whole-time worker. Further, the whole-time principle should be applied throughout the research organisation—to those who direct and plan, as well as to those who carry out the work.

[1] J. Mackenzie: Glasgow Med. Jour., 1920, xciv., 257.

Acute Rheumatism and Chorea.

It is a striking commentary on the difficulties of medical research that in quite ordinary infective and infectious diseases the ætiology and pathology remain most obscure. We need only instance many common exanthematous fevers and acute rheumatism. In this week's issue of THE LANCET we publish two recent and important papers dealing with different aspects of the problem of acute rheumatism and its clinical manifestations; in both of them a strong plea is made for more concentrated and general study of the subject. The first paper, by Dr. F. J. POYNTON, Dr. DONALD PATERSON, and Dr. J. C. SPENCE, was read before the Medical Society of London, and appears on p. 1086. It contains a careful analysis of 172 cases of acute rheumatism in children under 12 years of age admitted during 12 months into the wards of the Hospital for Sick Children, Great Ormond-street. These cases afford a remarkable illustration of serious results of the disease. Of the 172 cases observed by them nearly 13 per cent. died, over 17 per cent. became complete invalids, and nearly 30 per cent. had organic heart disease when examined three months after the end of the year considered. If the results were so serious after so brief a period, it is easy to conceive that the pathological effects and the economic loss entailed by them are extremely serious. A considerable portion of the paper is devoted to the subject of chorea; this condition was present in 104, or 60 per cent., of the 172 cases. In 37 out of these 104 cases of chorea there was no other evidence of rheumatism, but the writers believe it best to consider every case due to a rheumatic origin unless there is convincing evidence to the contrary. They maintain that of the three cardinal manifestations of rheumatism—heart affections, arthritic symptoms, and chorea—the last-named is the most frequent as a solitary symptom-group. They claim that there are two types of rheumatic attacks in the young—one, the more fatal, with tonsillitis, arthritis, and morbus cordis; the other, more chronic, with chorea and endocarditis, often resulting in mitral stenosis. This paper shows a close observation of this disease, and gives a careful analysis of symptoms and their significance. Two points of interest not generally mentioned in text-book descriptions are the association of severe stiff-neck with serious heart disease, and the striking taciturnity of cases with virulent involvement of the heart.

The second paper, which appears in full on p. 1081, is the Bradshaw lecture delivered before the Royal College of Physicians of London

by Dr. CECIL WALL on "Chorea." After an exhaustive and critical analysis of the clinical manifestations of this condition Dr. WALL has developed an ingenious explanatory hypothesis. For him chorea is a symptom-complex rather than a nosological entity, a distinction with which few would at present disagree. He points out that, although the rheumatic origin of ordinary chorea is now almost universally accepted, actual proof cannot be forthcoming until the ætiological agent of rheumatism has been conclusively established and its relation to chorea demonstrated. The figures he quotes show that in England and Wales in 1917 105·6 per 1000 of the deaths from all causes were due to organic heart disease, while 86·4 per 1000 were due to pulmonary tuberculosis and 82·5 to cancer. The two latter conditions are the object of organised and subsidised research; it seems almost incredible that "no attempt has yet been made toward coördinated investigation into the chief ætiological factor in the commonest cause of death." Dr. WALL'S careful study of the individual symptoms and the character of the movements should be carefully followed in order to judge of the evidence on which he bases the following hypothesis as to their genesis and nature. He modestly disclaims priority or originality for this hypothesis and shows that it was adumbrated in 1784 by PROCHASKA and first definitely put forward by WARNER in 1887. Dr. WALL believes that chorea is due "to a reversion or regression to a functional capacity characteristic of an earlier stage of development," and maintains that choreic movements are in their essentials like those of the microkinesis of children, and are due to diminished control owing to impairment of certain cerebral centres, presumably cortical in situation. This attractive hypothesis is developed and discussed by Dr. WALL with great skill, and seems to offer an intelligible explanation of these peculiar movements.

If some concerted action could be taken in regard to rheumatism far-reaching results might accrue. There is work here for bacteriologist, clinician, hygienist, and political economist. The greater gravity and frequency in the class treated in hospitals compared with other classes is a point brought out by Dr. POYNTON and his colleagues. Some of the problems which might be collectively studied were well illustrated in a paper published in THE LANCET of July 24th by Dr. CAREY F. COOMBS on Incidence of Fatal Rheumatic Heart Disease in Bristol from 1876–1913. The material for study abounds, the prospects of national benefit from such a research are good—all that is necessary is some official stimulation and coördination and the necessary financial endowment.

Prescribing and Dispensing.

THE law relating to the prescribing and dispensing of medicine may be regarded as having reached a stage when the former conditions are being gradually but inevitably replaced. There is a growing tendency to advocate the complete separation of the two procedures, and it is probable that in the near future some legislative measures may be taken to produce this result. The growth of panel practice prepared the way for such a change, since it regularised the conditions of remuneration, which, it was hoped, would be satisfactory both to the medical profession and to the dispensing chemists. So far as medical men are concerned it is probable that this separation of work will be cordially welcomed by some, since they will thus be relieved from the labour of dispensing after rounds of visiting. There is no doubt that after a long and possibly arduous day's work the procedure of dispensing and the necessary bookkeeping are very irksome to some, and they are rendered all the more irksome by the feeling of responsibility medical men must have in regard to absolute accuracy. Casual attention is not sufficient; no care can be too great, and the scrupulous exactitude which is routine to the trained pharmacist is only got by the medical man through unremitting watchfulness. And medical men, to whom the pharmacological side makes no particular appeal, find the task of dispensing especially distasteful. But it must be remembered that there are others of a different way of thinking who will not welcome compulsory divorce from what they regard as an integral part of medical practice.

The necessity for order and attention in all pharmacological procedure has recently been made apparent by circumstances in the course of the Kidwelly poisoning case which have been so widely advertised in sensational reports that they require no detailed reference. The evidence in the course of this case has given the Council of the Pharmaceutical Society of Great Britain an opportunity of calling the attention of the Privy Council, the Ministry of Health, and the Home Secretary to the advisability of appointing a committee to inquire as to what changes, if any, are necessary in (1) the law relating to the prescribing and dispensing of medicines; (2) the supply and use of poisonous weed-killers. With the second or trade question the medical profession is not directly concerned, for interference would probably only take the form of diverting the channels through which these articles can be procured. But in regard to the first point, it is the opinion of the Council that the Kidwelly case has provided striking evidence in favour of separating the functions of prescribing and dispensing in this country, as in many countries abroad. The Council of the Pharmaceutical Society, moreover, indicate clearly the desire not only that medical men should cease to dispense, but also that dispensing chemists should cease to prescribe. This is an admission of the possibility of danger in a direction which has often been noted by medical men, but the extent of the mischief has hardly been realised by the public. If from the disassociation of prescribing and dispensing the public learns that a doctor should not be consulted merely to obtain medicine, undoubtedly there will be professional gain, but stronger arguments in favour of separation are afforded by the practice of prescribing by pharmacists in whose curriculum the treatment of disease finds no place. We know very well that some pharmacists do not prescribe at all, and that the others, with but few exceptions, prescribe only for simple ailments; but there, unfortunately, is where the peril lies. The prescribing chemist, even though he sets himself this limitation, may at any moment encourage a false sense of security in a case of phthisis by administering a cough mixture, and thus the critical early months go by; or he may treat a diphtheritic throat as a simple tonsillitis until it is too late to administer antitoxin usefully.

The Dangerous Drugs Act introduces numerous regulations which will tend to favour the separation of prescribing and dispensing. This Act is the necessary outcome of the International Opium Convention, which was signed at the Hague in

1912, and its provisions are likely to be very far-reaching in their effects. It cannot be doubted that the regulations for controlling the manufacture, sale, possession, and distribution of the drugs to which this Act applies will be somewhat inconvenient or even harassing both to prescribers and dispensers, but it is possible that some of these would only be temporary as the public became educated in the matter. In America a Federal narcotic law has been passed which is intended to furnish a means by which all preparations containing opium or cocaine can be traced from the importer to the ultimate consumer and their final disposition determined, and to limit the traffic in these drugs or preparations to persons legally qualified to carry on such business. It remains to be seen whether the regulations for this country will agree in the main with those already adopted in America. If they do they will probably be welcomed by all who place a desire for the public welfare far beyond personal inconvenience or financial loss. Prescribers are sure to be hampered by new regulations, but if these are recognised as calculated to reduce the dangers of the distribution of narcotics, we believe that they will be received with relative enthusiasm. Whether they will be equally agreeable to dispensing chemists is another matter, since it is possible that the regulations will not only diminish the sale of these articles, but will also involve a most elaborate system of records and frequent inspections. Troublesome though these may be, it is to be hoped that experience in this country may enable us to repeat the commendation of an American pharmacist[1] that the very men who have suffered most in the loss of sales by this legislation have been in the forefront in putting this law on the statute books and seeing that it has been enforced.

The clearly stated policy of the Council of the Pharmaceutical Society of Great Britain will meet with favour from all pharmaceutical chemists who have set the scientific ideal before them, and from all medical men who are in a position, as far as their public efficiency is concerned, to relegate their dispensing. But it is not reasonable to expect that the reception of such regulations as the Council of the Pharmaceutical Society desire, though they undoubtedly have the best of reasons for their creation, will be wholly favourable. As we have already suggested, the separation of prescribing and dispensing should minimise the risks of the use of narcotics. In spite of due observance of the provisions of the Pharmacy Acts evidence at inquests has shown that hitherto these have had little power in checking the sale and distribution of such drugs as morphine and cocaine. This is a great point in favour of the separation, but there are whole districts where separation would produce real practical difficulties, and would entail upon the public considerable hardship in having to make visits to separate centres for the treatment of one ailment. A way of reconciling the arguments for and the arguments against the separation of prescribing and dispensing is for the medical practitioner, if he choose to dispense, to obtain the services of a member of the Pharmaceutical Society, but for financial reasons this may not be practical. A meeting between the General Medical Council and the Council of the Pharmaceutical Society might throw light on a difficult situation.

[1] Proc. Tennessee Pharm. Assoc., 1915, p. 43.

Annotations.

"Ne quid nimis."

THE PRESIDENT OF THE ROYAL SOCIETY.

ON Tuesday next, St. Andrew's Day, Charles Scott Sherrington, Waynflete Professor of Physiology in the University of Oxford, is to be elected President of the Royal Society of London for Improving Natural Knowledge. The determination of the choice upon Professor Sherrington is of more than usual interest to the medical profession. He is a qualified medical man, though he has not, we believe, ever indulged in the active practice of his art, as did his great predecessors, Benjamin Brodie and Joseph Lister; he belongs rather to the group represented among past presidents by Huxley, who have, through the humane discipline of a medical training, found their real work in other, though related, fields. For while his researches on the nervous system have been truly philosophical, and clearly belong to those fundamental studies in which the natural curiosity of the human mind finds exercise and satisfaction, his results have been of prime importance to practical medicine, and his conceptions have become part of the groundwork of neurology. His relation to medicine illustrates plainly the truth that the most real help which medicine receives from physiology and the other branches of natural science comes from those whose pursuit is knowledge rather than from those who make premature attempts to invade the unfamiliar ground of clinical inquiry. During his career as lecturer on physiology at St. Thomas's Hospital Medical School, professor superintendent of the Brown Sanatory Institute, Holt professor in the University of Liverpool and of late years in Oxford, Sherrington has endeared himself to many members of the profession who will unite in wishing him a happy and successful tenure of the illustrious position which he now reaches.

THREATENED RECRUDESCENCE OF EPIDEMIC KALA-AZAR IN ASSAM.

THERE are many who can recall the terrors of the kala-azar epidemic in Assam from 1880 to 1900, which culminated in the Nowgong district, where one-third of the population were carried off within ten years and extensive areas of land fell out of cultivation. For them the information in a supplement to the Sanitary Report of the Province for 1919 by Major McCombie Young, I.M.S., is of especial interest, as he gives evidence of a threatened recrudescence of the epidemic form of the disease spreading in areas previously uninfected. It will be remembered that the sparsely populated Mikir Hills formed an obstacle to the further easterly extension of the epidemic from the Nowgong district for a considerable time, but in 1910 a few villages were found to be infected in the neighbouring Golaghat subdivision of the Sibsagar district, which were promptly dealt with by moving the people from the infected sites—as recommended in the 1897 report on an investigation of the disease, such segregation measures having in the meantime proved successful on tea estates of the Nowgong District under the care of Dr. Dodds Price. In 1917 a more serious extension of the disease was discovered in the most easterly Sibsagar subdivision of the Sibsagar district, the central Jorhat subdivision having been almost completely skipped by the disease. Similar measures were at once carried out under the direction of Major Young, while by this time we were fortunately in possession of an efficient treatment of this deadly disease by antimony salts intravenously, which has already reduced the death-rate from 90 per cent. to less than 25 per cent., a special hospital having been provided in 1918 in the newly infected area. In the recently issued report the present condition of the Province as regards kala-azar is carefully described, and it is pointed out that in Sibsagar the segregation measures have also met with a considerable degree of success in

stamping the disease out of the villages dealt with, but probably on account of their having been applied to too restricted areas for economy sake, they have not prevented the spread of the disease to fresh villages, leaving it still very uncertain if success will be obtained in preventing a serious further invasion of new territory with disastrous results. One hopeful sign is that the people have so fully learned the value of the new treatment that instead of hiding their cases, as formerly, they now frequently themselves report them and ask for the treatment. Moreover, the mortality returns do not yet show any increase in the total death-rate of the province from kala-azar during the year 1919, so that there is still good hope that the timely discovery of newly infected villages, and a perseverance with the valuable measures now available for dealing with the recrudescence, may prevent any such serious catastrophe as overwhelmed the westernly districts of Assam at the end of the last century, districts which still show sporadic cases of kala-azar with occasional more extensive infection of a few villages. The Sanitary Commissioner quotes from the 1897 report on kala-azar a warning against either an insidious extension of the disease to the east up the Brahmaputra Valley or a fresh outbreak lighted up by an ominous succession of unhealthy years such as were thought to have caused the former spread of the disease, and he suggests that the influenza epidemic may have acted in this manner. Fortunately, the Chief Commissioner of Assam has ordered that the demands of the present campaign against kala-azar shall take precedence over all other financial claims, showing that the present administration is fully alive to the danger. One thing more, however, is urgently wanted, for, as the Sanitary Commissioner points out, in spite of important advances in the control of kala-azar in recent years, we are still working in the dark for want of certain and detailed knowledge of the mode of infection. The solution of this important problem has now become more urgent than ever. Fortunately, the establishment of the Pasteur and Research Institute at Shillong, and the opening at the present moment of research work under the endowment fund of the Calcutta School of Tropical Medicine and Hygiene, with the prospect of the Government staff of professors of that school being available in March next, will allow of team-work at this problem being at last undertaken with every prospect of success.

MARTINOTTI'S ANTITUBERCULOUS VACCINE.

IN THE LANCET of August 14th (p. 363) we drew attention to a vaccine prepared by Professor Martinotti, of the University of Bologna, which was not a tuberculin but a substance containing a protein which acted as an antigen and converted the parasitic tubercle bacilli into harmless saprophytes. This vaccine has been used by Dr. E. Ruggeri,[1] of the University of Modena, in pulmonary tuberculosis, and by Professor V. Remedi,[2] of the University of Siena, in cases of surgical tuberculosis.

The former observer gives an account of 32 cases of phthisis treated by the vaccine, of which 19 were clinically cured and had remained so for more than two years, 5 were in process of cure (tubercle bacilli being no longer found in the sputum), 5 were found unsuitable for further treatment owing to unusual reaction or severity of the local lesion, and 3 remained stationary without showing any improvement. Thus definite results were obtained in 22 cases (19 of complete cure and 3 unsuccessful), giving a percentage of 86, while counting also cases in process of cure the percentage was 85. It was found that the first changes noticed in the cases which were cured were subjective—i.e., a feeling of general well-being, increased appetite and spirits, dating from the third or fourth injection. That these effects were not the result of suggestion is proved by the fact of their being soon followed by objective symptoms, such as diminution of cough and night sweats, disappearance of fever generally after five or six injections, increase of body weight, and ultimate disappearance of tubercle bacilli from the sputum and of characteristic physical signs in the lungs.

The surgical cases treated by Professor Remedi comprised osteoarthritis of the joints of the limbs, some complicated with fistulæ and abscess, 21 in all, of which 7 were cured and 10 improved, 4 with injections of vaccine alone and others with additional appropriate surgical measures. Of 9 cases of osteoarthritis of the vertebral column 1 was completely cured without deformity, and 7 distinctly improved with the help also of immobilisation. There were 16 cases of osteoperiostitis of which 7 were cured, while of 4 cases of the same with several foci only 1 was cured. Of 12 cases of tuberculosis of the soft tissues, such as closed abscesses and cutaneous ulcerations, good results were obtained. Five cases of non-suppurative enlarged glands were all cured without further treatment. Other conditions in which cure or improvement ensued were tuberculous peritonitis, tuberculosis of the kidney, and empyema. Altogether out of 100 cases of these tuberculous surgical affections 44 complete cures were claimed, local and general improvement 45 cases, and relapses after cure 4 cases, while no improvement took place in 10 cases.

Professor Remedi states, as an answer to the criticism that the number of actual cures was not great, that many of the cases which were improving withdrew themselves from treatment before the cure was complete. To the objection that surgical treatment was also used in many cases, he replies that these measures were directed to the elimination of poisons originating in necrosed tissues and to the limitation of the focus of disease. By this means the production of new poisons is arrested and the tissues rendered less favourable to the growth of the specific organism. He notices, however, that the immunity produced by the vaccine seems to disappear in a certain time after suspending the injections, and this point was also insisted on by Professor Martinotti in his original communication—namely, that cases of cure must be carefully watched and fresh injections given should any signs of relapse become evident.

[1] Tuberculosi, 1920, Nos. 5 and 6. Roma: V. Gino Capponi.
[2] Archivio Italiano di Chirurgia, 1920, No. 1, Bologna.

ACQUIRED SYPHILIS IN THE AGED.

Dr. Burton Peter Thom,[1] visiting syphilologist to the Hospitals of the Department of Correction, Blackwell's Island, remarks that there is scarcely any mention of primary syphilis in the aged in American or English literature, the subject having been exclusively studied by the French and Germans. Authorities are generally agreed that syphilis contracted in old age is more active and formidable than when it is acquired earlier in life. The incubation period is longer than usual, being five to seven weeks. The chancre is larger, often phagedænic, and is frequently mistaken for a malignant growth, especially if situated extragenitally. It may here be noted that though Sigmund declares that extragenital chancres are more frequently encountered in the aged, Dr. Thom maintains that they are not so frequent as in childhood. The induration of the chancre in old persons is well marked and persists long after the lesion has healed. The glandular enlargement also has more induration than in younger subjects and may persist indefinitely. The secondary eruption appears early and is almost always papular. The roseola which is so frequent in earlier life is conspicuous by its absence. Mucous patches also appear early on the mouth and tongue, as well as between the toes, but are rarely found about the genitals or anus. Iritis at this stage is extremely common in old persons, being found by Lebard in one-third of his cases. At the onset of the secondary stage the general health undergoes a change for the worse, asthenia and cachexia rapidly develop, and unless prompt treatment is employed death is liable to supervene. The blood shows a constant and decided fall in the number of the red corpuscles and an excessive diminution in the percentage of hæmoglobin and albumin in the serum. Tertiary cutaneous manifestations, which are frequent and early, may prove very destructive unless properly treated. Cerebrospinal lesions are also common. Owing to the probably degenerated condition of the kidneys and cardio-vascular system greater circumspection is required in the treatment of syphilis in the aged than in younger persons. Neosalvarsan should always be given, as it can be administered in a smaller amount of fluid, and therefore will not strain the heart and arteries as when the larger

[1] Medical Record, Oct. 30th, 1920.

amount of fluid required for original salvarsan is given. The doses should always be smaller than for younger persons, and there should be three or four days' interval between each injection. Supporting treatment should be combined with antisyphilitic therapy.

A SUBCONSCIOUS MOTIVE FOR STRIKING.

NOW that the coal strike is over advantage may be gained by suggesting other influences than wage questions, which may have provided an unconscious impulse to strike among the miners. Strikes, we believe, frequently depend upon underlying reasons which create unrest among the workers, reasons which do not appear among the points at issue. Professor E. L. Collis, in a letter which appeared in the *Times* in September, drew attention to the fact that the ballots, especially the first one taken, showed a very unequal desire for a rest on the part of the various coal-fields, thus:—

Coal-field.	Percentage voting for a strike.
Yorkshire	*51·1*
Nottinghamshire	55·1
Durham and Northumberland...	69·1
Derbyshire...	71·9
South Wales	78·0
Lancashire...	89·8

The above list (arranged in order according to the size of the majority) only includes those coal-fields for which the Registrar-General publishes mortality data. The most recent data arranged in order according to mortality are as follows:—

Coal Miners.

Coal-field.	All causes.	1910-12				1900-2
		Comparative mortality due to—				
		Respiratory diseases.			Accidents	
		Phthisis.	Bronchitis.	Pneumonia.		
Nottinghamshire..	570	53	25	40	66	80
Derbyshire	591	70	39	34	73	
Durham and Northumberland	635	70	33	54	83	105
Yorkshire	*758*	*81*	*45*	*69*	*117*	*99*
Monmouthshire and South Wales	777	70	66	69	131	169
Lancashire	941	107	88	100	183	131
Occupied and retired males ...	790	142	38	67	—	58

The similarity in the order of the coal-fields arranged by these two methods is remarkable. Yorkshire (italicised in the tables) is the only field notably out of place; but in August of last year the miners on this field indulged all by themselves in a six weeks' strike or rest; undoubtedly this past event affected the voting. Allowance having been made for this exception, the order of the coal-fields in the two tables is so closely correlated as to point to a common influence determining both. The question may fairly be asked whether the voting recorded not so much an answer to the question on the ballot paper as the amount of discontent resulting from ill-health present on the various fields. Certainly the figures suggest the possibility that if the mortality, especially that due to accidents, on all the coal-fields had been as low as that for Nottinghamshire there would have been no two-thirds majority for a strike.

The most important cause of death among miners is "accidents," which is always in excess on all coal-fields; possibly here lies one reason for unrest among miners, on the supposition that a community experiencing an undue number of accidents will be like a regiment experiencing heavy casualties—that is, it will be liable to "get the wind up" or (to employ language of modern psychology) to be constantly suppressing the sensation of fear. From this influence irritation and neuro-psychoses arise, for, as Dr. C. S. Myers has pointed out in a book which we review in another column, "in dangerous trades the workers show a tendency to neurasthenia. This is especially marked among coal-miners. Of the cases of nervous breakdown occurring during the late war, a disproportionately large percentage was found among soldiers who had been miners." Most practitioners on coal-fields will agree that miners do exhibit an undue tendency to neurasthenia. The same argument might be held to apply to railway workers; their tendency to strike needs no comment; they appear with the coal-miners among the list of occupations with the highest mortality from accidents. Other instances might be quoted, but they might give the impression that accidents are the only influence which affects health so as to produce social unrest. This would be wrong. We hold that a combined study of vital statistics and of the epidemiology of strikes would disclose other important factors. In passing we would remark that the lowly paid and poorly housed, but healthy, agricultural labourer is difficult to induce to strike.

The health and happiness in the mining industry are of humanitarian interest to the whole community, while on the utilitarian side practical action should immediately be taken if those who control the coal-fields desire to avoid future trouble. An active safety-first compaign should be set on foot on up-to-date lines, especially in Lancashire, South Wales, and Yorkshire. America has been teaching us how to proceed by first seeking the coöperation of the workers through workmen's safety committees. Action on these lines is already being taken with signal success in our factories. Other things might also be mentioned which would improve the welfare of miners, such as pit-head baths and the sending of food trolleys carrying hot meals into the workings from a central kitchen. But for the moment we are content to lay stress on the point that social unrest depends on ill-being, the forerunner of ill-health; and to appeal to politicians to appreciate the importance of health to the community so that they may cease to struggle with their problems in the dark.

ACUTE POST-OPERATIVE DILATATION OF THE STOMACH.

THE interesting discussion by Mr. W. G. Spencer, in *Medical Science* for November, on acute dilatation of the stomach, its causes and treatment, may be supplemented by the following case, recorded by the Norwegian surgeon, Dr. O. Usland[1]:—

His patient was a sea captain, aged 51, with an easily reducible, indirect inguinal hernia on the right side and a rather large, irreducible femoral hernia on the left side. The local anæsthetic used for the radical operation on both sides was a 0·5 per cent. solution of novocain, containing 10 minims of adrenalin to the 100 c.cm. Altogether 120 c.cm. of this solution were used, and immediately before the operation 1 cgm. of morphine was injected subcutaneously. Bassini's radical operation was carried out without difficulty on the right side, but on the left side the hernia contained adherent omentum, the detachment and resection of which provoked some pain. Otherwise the operation, which lasted about one and a half hours, was perfectly painless. Next day he felt well, but the abdomen was somewhat distended, and in the evening he complained of an increasing sense of oppression in the upper abdomen. He slept badly, and next morning he began to vomit. The pulse was 80, the temperature 36·2° C. There was diffuse distension of the abdomen, but little tenderness. Later, he complained of nausea, a sense of great pressure in the chest, and of impending death. He was pale, cyanosed, and bathed in a cold sweat. The pulse of 120 was small and soft, and there was considerable dyspnœa. The abdomen was distended, and when a stomach-tube was introduced much gas and at least 3 litres of a brown-green fluid escaped under high pressure. The stomach was then irrigated with 20–25 litres of water, which gave some relief. Complete and instantaneous relief was obtained by a change to the prone posture and the tilting up of the pelvis by a pillow. About half an hour later there was a free escape of flatus, and ultimately complete recovery followed.

The only similar case which Dr. Usland can find was recorded by Lyle.[2] In this case, too, local anæsthesia

[1] Medicinsk Revue, 1920, xxxvii., p. 95.
[2] New York Medical Journal, 1911.

was employed, and a large piece of omentum found in the hernia was resected. He suggested that temporary paralysis of the stomach had been provoked by circulatory disturbances or by the shock to the nervous system caused by resection of the omentum. Given this state of paralysis, it only requires the formation of gas in the stomach or the introduction of food to produce the alarming symptoms recorded. As Dr. Usland points out, in about 50 per cent. of all the recorded cases the symptoms developed soon after the administration of fluids or solid food.

THE "LANGHAM" TELEPHONE EXCHANGE.

IN order to provide additional telephone facilities in the area between Oxford-street and Regent's Park, and to relieve the pressure at the existing Mayfair exchange, there will be opened, probably in January, a new exchange in Vere-street, W., which will be called "Langham." The area to be served by the new exchange includes Harley-street and the adjacent thoroughfares, and it is proposed to change about 600 lines rented by members of the medical profession to "Langham" numbers. The new numbers of these lines cannot appear in the London Telephone Directory until the issue of April, 1921, and to avoid inconvenience during the interval (and afterwards if necessary) arrangements are being made by the Controller of the London Telephone Service to advise callers of the changes and, as far as possible, to divert calls to the new numbers.

COLLES'S LAW AND THE WASSERMANN REACTION.

THE observation of the Dublin clinician, Abraham Colles, made a century ago, that a woman might bear a syphilitic child and show no signs of the disease and yet was immune to infection from the child, has been considered so well established as to be termed a "law." In the period before the discovery of the spirochæta of syphilis and the Wassermann reaction attempts were made to disprove it by bringing forward cases to the contrary, but they always failed. Two of the great syphilographers of the last generation, Fournier and Hutchinson, were firm believers in Colles's law. But the discoveries mentioned are supposed by many to have demolished the "law." Professor J. Whitridge Williams has recently published[1] a valuable study of the Wassermann reaction in obstetrics, based upon 4547 consecutive cases, in which he incidentally discusses the veracity of Colles's law. It has been found that the blood of pregnant and puerperal women who were supposed to exemplify the law almost uniformly give a positive Wassermann reaction. It was therefore concluded that the reason the mother was not infected by her child was that she was already suffering from the disease, which for some unexplained reason existed in a latent form. But Professor Williams has found that of the women who present a positive reaction only a few give any evidence of having had a primary sore, and in less than 20 per cent. can a history of the usual secondary or tertiary manifestations be elicited. Moreover, very few of the patients who have been under his care for many years, many of whom have not been treated, have shown the usual sequelæ of the disease. Again, Is a positive reaction during pregnancy anything more than evidence of the establishment of immunity in the mother against a syphilitic product of conception? This view is supported by three cases of a positive reaction during pregnancy and birth of a syphilitic child which were followed some weeks or months later by a negative reaction. Another observer, Menten, found that under similar circumstances a positive was converted into a negative reaction in 12 out of 26 cases. Further, if a positive reaction during pregnancy is evidence of the existence of latent syphilis, what can be said of 63 women in Professor Williams's series who presented a negative reaction and gave birth to 43 definitely syphilitic children? He also has seen several cases strongly supporting Colles's law. One of them is as follows. In 1896 and 1897 a coloured woman had her fifth and sixth labours in the out-patient department, giving birth to healthy children. In 1898 she gave birth to premature male double ovum twins. One survived and the other died three hours after birth. A necropsy showed syphilitic cirrhosis of the liver and interstitial splenitis. Microscopic examination of the two placentæ showed that the first was normal, while the second presented the lesions generally ascribed to syphilis. Thus one twin was normal, the other syphilitic. On questioning, the woman admitted intercourse with a man who was under treatment in the hospital for syphilis, as well as intercourse with her husband. The subsequent history confirmed this interpretation, for the patient had 11 labours at term with live children and normal placentæ. The modern tendency to regard purely clinical methods as inferior and out-of-date, and the tests of the laboratory as much more reliable here receives a check. It is curious that while the old "law," based entirely on clinical evidence, still withstands attacks, the value of one of the latest laboratory tests comes itself into question in conflict with it.

[1] Johns Hopkins Hospital Bulletin, October, 1920.

THE SCHOOL MEDICAL SERVICE.

THE Annual Report of the Chief Medical Officer of the Board of Education for the year 1919 (Cmd. 995. Price 2s.) is the best report issued by the medical department of the Board since its establishment in 1907. The dual function of these reports must be borne in mind, for were they not intended to inform and instruct all who have the privilege of paying an education rate, the medical reader might complain that the wealth of generalities hinders important novelties from securing a full measure of attention, and that some of the material with which this particular report is replete would form subject for differences of medical opinion. It is as a year's record of school medical service that we are regarding the report now. An important definition of the position of the school medical officer occurs quite early on. Whilst it is essential, the passage runs, that the principal medical officer responsible to the authority for the smooth and proper working of the service should be primus inter pares and the recognised chief of his department, it is equally necessary that all the professional officers of the authority should be accorded the status to which their profession and duties entitle them. This is shortly followed by an indication of the possibilities of valuable scientific work for the advancement of knowledge being carried out in the service. The school doctor should, it is suggested, throw new light on the incidence and degree of defect or disease, on the physiology of the child, on the beginnings of disease, on the relation of physique to mental capacity, on the standardisation of signs and symptoms, and many other problems that still await solution. The specimen tables required by the Board, if accurately filled up, should certainly provide an adequate review of school medical inspection, but they are so full and detailed that the labour of keeping such records will be considerable. A risk is thus open for mechanical inspection which readily degenerates into mere drudgery. We wish it had been possible for the Board to lay down a maximum of not more than (say) 20 cases to be subjected to routine examination during any one session, thus arriving a little more gradually at the desired uniformity.

The section of the Report which deals with dental disease is thorough and good. In it the colossal evil of sepsis is set forth and the need for extensive provision of dental inspection and treatment. The employment of dental dressers is suggested as allowable. The Board is steadily coming to the opinion that the earlier teeth are inspected the better, and dental examination of the five-year-old entrant is now recommended. In following up these cases the great value of the school nurse as home visitor has been shown beyond doubt. The statement in a footnote that in practice a school dentist can examine 80 children and record his findings in a school session of two and a half hours is evidence again of that time pressure which has

done so much to eliminate scientific observation and arrest progress in school hygiene. The results of school inspection in London show a definite improvement in the children's health, although a wise reticence in drawing conclusions as to general conditions over wide areas forbids more than the assertion that gross defects are declining steadily. Extension of medical and dental treatment—the latter, in the words of the report, not one-tenth of what is required—is the present keynote of the school medical service. The school clinic has been vindicated as at once the most effective and in the long run the most economical form of provision that can be made by a local authority in the discharge of its obligations for attending to the health and physical condition of children in public elementary schools. The chapter on cripples is a hopeful review of a subject which is beginning to attract the attention it deserves. Not much weight has been attached to poliomyelitis, epidemics of which leave their trace in a crop of cripples in the second- and third-year age-groups, but handled early these cases are extraordinarily amenable to treatment, as has been shown in two large schools in Chicago. The sections of the Report which deal with the crippled child, with the value of physical education, and with the question of juvenile employment will receive further consideration in these columns.

BENIGN TUMOURS OF THE LABIA.

ACCORDING to Dr. William H. Condit,[1] assistant professor of gynæcology and obstetrics at the University of Minnesota Medical School, who has had an unusually large experience of these tumours in his practice, the majority of the benign growths of the vulva are confined to the labia majora, and it is extremely unusual for the labia minora to be affected. The most frequent tumour is the cyst which usually arises from the Bartholinian duct or gland as the result of infection, especially gonorrhœa, trauma, or simple hypertrophy of the gland. Sebaceous cysts of the labia majora and labia minora are not uncommon. Dermoid cysts may occur in this region, but are exceedingly rare. Fibroid growths while rather uncommon are next to the cyst in frequency and are the commonest of the benign solid neoplasms met with in this area. Like the retention cysts of Bartholin's gland they are liable to undergo cystic degeneration as the result of circulatory impairment due to the process of growth. During menstruation, and still more so in pregnancy, they increase in size, cause pain, and may become hæmorrhagic. Two-thirds of the fibroids of the vulva originate from the subcutaneous connective tissue and one-third from the extraperitoneal portion of the round ligament. Lipoma of the labia is one of the rarest gynæcological affections, Kelly having collected only 20 cases from the literature in 1906. It presents the same characters as lipomata present elsewhere in the body, and is liable to be mistaken for a cyst, elephantiasis, varicocele, and fibroma. Myxoma of the labia is also rare. In most cases it is benign, but occasionally it shows signs of malignancy. Lastly, Dr. Condit describes a case of leiomyoma which had obviously originated from some small unstriped muscular fibres of the Bartholinian duct, and was at first taken to be a cyst of the Bartholinian gland, but on microscopical examination showed bundles of muscle cells running in different directions.

THE first scientific meeting of the Section of Tropical Medicine, Royal Society of Medicine, will be held at the house of the Society, 1, Wimpole-street, London, W., on Tuesday, Nov. 30th, at 5 P.M., when a paper will be read by Dr. F. G. Rose on the Incidence of Filariasis in British Guiana. Demonstrations will also be given and clinical cases shown. Fuller particulars were given last week, and will be found to-day in our Medical Diary.

[1] Surgery, Gynecology and Obstetrics, November, 1920.

BRISTOL MEDICAL SCHOOL: ANNUAL DINNER.—This dinner will take place on Dec. 9th in the Lesser Colston Hall, Bristol. Dr. George Parker will preside and Sir Robert Jones will be the guest of the evening.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

THE Winter Session of the General Medical Council opened on Monday, Nov. 23rd, under the presidency of Sir DONALD MACALISTER. In addition to the members present Sir Charles Tomes attended as the guest of the Council. The official notification of the appointment of Dr. D. J. Coffey as Representative of the National University of Ireland for three years from July 30th, 1920, having been read, Dr. Coffey was introduced to the Council by Dr. MAGENNIS. Three members of the Council intimated their inability to be present during the session—Dr. J. A. Macdonald, Dr. D. Hepburn, and Dr. Matthew Hay.

President's Address.

The PRESIDENT, in his opening address, pointed out that by the recent death of Dr. William Bruce they had lost a former colleague who sat for 20 years as Direct Representative for Scotland and who had left an honoured memory as a leader of professional thought and action among Scottish practitioners. He alluded also to the honour that had been done to Sir Clifford Allbutt in his appointment to the Privy Council.

He reported the Bill for the amendment of the Dentists Act to be in a forward state of preparation, stating that the Minister of Health had furnished representatives of the Council with opportunities of stating their views at various stages. The Dangerous Drugs Bill he reported as having passed into law, though it was probable that the Pharmacopœia Committee of the Council would be consulted as to the regulations governing such details as the manufacture, sale, prescribing, and dispensing of opium, cocaine, and other potent drugs.

Of the interim reports of the Medical Consultative Councils for England and for Scotland, he said that the proposals in these documents for the better organisation of medical practice required the fullest discussion on the part of the profession and of the public, as their common aim was to render more effective the manifold services which the profession of medicine in all its branches is capable of rendering to the nation. One great message of these reports he considered to be that the professional training of future medical practitioners must be improved; and he urged that the Council, one of whose principal functions was the standardisation of medical education, should consider both as a body and through its enlarged Education Committee, the whole subject of the revision of the curriculum. Of the various inspections of final examinations in medicine, surgery, and midwifery, he said that the official confidential reports had been received, and that he might at this stage say, after critical study of the documents, that they gave abundant evidence of the care bestowed by licensing bodies generally on the fulfilment of their important public function.

The remainder of the report dealt largely with the question of medical reciprocity within the Empire, and the President noted that movements in Canada, in the Protectorate of South-West Africa (lately German), in the territory of Tanganyika, in South Australia, and in Tasmania, had been towards that end. He also called special attention to a visit of inspection made last May to the United States by Dr. Norman Walker, Mr. H. J. Waring, and Sir Humphry Rolleston on behalf of the Royal Colleges in London and Edinburgh, which had resulted in favourable reports on the methods of the American National Board of Medical Examiners, thus confirming his statement to the Council a year ago that influential movements towards the establishment of high and uniform standards of professional qualification throughout the American Commonwealth were taking place.

The President also announced that Sir Archibald Bodkin, having been appointed to the important legal

office of Director of Public Prosecutions, arrangements had been made for attendance at this session of the Council as Judicial Assessor of Mr. E. W. Hansell, Recorder of Maidstone. Instructions regarding a definite appointment will, he said, be arrived at during the week.

WEDNESDAY, NOV. 24TH.

The Council proceeded to the consideration of Penal Cases.

The first case was that of Nariman Hormusji Clubwala, L.M.S., M.D. Univ. of Bombay, who was charged with having given, as a locum tenens, a certificate of unfitness for military duty to a patient whom he had only seen once, appending the signature of his principal to the incorrect details. The charge was brought by a representative of the Australian Imperial Force, and, having been substantiated, the name of the offender was removed from the Register.

URBAN VITAL STATISTICS.

(Week ended Nov. 20th, 1920.)

English and Welsh Towns.—In the 96 English and Welsh towns, with an aggregate civil population estimated at nearly 18 million persons, the annual rate of mortality, which had increased from 10·7 to 13·4 in the five preceding weeks, fell to 12·8 per 1000. In London, with a population of nearly 4½ million persons, the annual death-rate was 13·6, or 1·3 per 1000 below that recorded in the previous week, while among the remaining towns the rates ranged from 5·1 in Smethwick, 6·3 in Oxford, and 7·1 in Ealing, to 19·2 in South Shields, 19·4 in West Bromwich, and 20·1 in Southport. The principal epidemic diseases caused 249 deaths, which corresponded to an annual rate of 0·7 per 1000, and comprised 123 from infantile diarrhœa, 64 from diphtheria, 31 from measles, 17 from scarlet fever, 10 from whooping-cough, and 4 from enteric fever. The deaths from diarrhœa, which had been 185, 129, and 106 in the three preceding weeks, rose to 123, and included 24 in London, 12 in Liverpool, 9 in Manchester, and 6 in Hull. The mortality from the remaining diseases showed no marked excess in any of the large towns. There were 5610 cases of scarlet fever and 2562 of diphtheria under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, against 5512 and 2474 respectively at the end of the previous week. The causes of 26 of the 4386 deaths in the 96 towns were uncertified, of which 3 were registered in London, and 2 each in Birmingham, Liverpool, St. Helens, and Middlesbrough.

Scottish Towns.—In the 16 largest Scottish towns, with an aggregate population estimated at nearly 2½ million persons, the annual rate of mortality, which had been 13·9, 14·7, and 14·3 in the three preceding weeks, fell to 13·6 per 1000. The 323 deaths in Glasgow corresponded to an annual rate of 15·1 per 1000, and included 8 from whooping-cough, 5 from infantile diarrhœa, 3 from diphtheria, and 1 each from enteric fever and scarlet fever. The 70 deaths in Edinburgh were equal to a rate of 10·7 per 1000, and included 3 from infantile diarrhœa, 2 from whooping-cough, and 1 from measles.

Irish Towns.—The 152 deaths in Dublin corresponded to an annual rate of 19·1, or 2·3 per 1000 above that recorded in the previous week, and included 9 from infantile diarrhœa, and 1 each from measles and diphtheria. The 104 deaths in Belfast were equal to a rate of 13·0 per 1000, and included 1 each from enteric fever, scarlet fever, whooping-cough, and infantile diarrhœa.

The Services.

ROYAL NAVAL MEDICAL SERVICE.

Surg. Lieut. Cmdr. (retired) F. C. Alton is reinstated on Active List.

Surgeon Lieutenant Commanders to be Surgeon Commanders: J. S. Orwin and H. W. Nicholls.

ROYAL ARMY MEDICAL CORPS.

Major E. Gibbon relinquishes the temporary rank of Lieutenant-Colonel and is restored to the establishment.

F. H. Scrimgeour relinquishes the rank of local Major.

To be temporary Captains: F. E. Johnson (late temporary Captain) and R. S. Aspinall (late Captain, Spec. Res.).

Capt. E. Parker resigns his commission.

Temp. Capt. G. T. Wrench relinquishes his commission and retains the rank of Captain.

TERRITORIAL FORCE.

Capt. (acting Major) J. A. Henderson relinquishes the acting rank of Major on vacating appointment of Deputy Assistant Director of Medical Services.

Capts. F. W. Goodbody (from T. F. Res.) and D. F. Dobson) late R.A.M.C.) to be Captains.

HYGIENE ON THE SEA:

ACCOMMODATION FOR SEAMEN IN SHIPS OF TO-DAY.[1]

(BY OUR SPECIAL CORRESPONDENT.)

IV. THE "ACHILLES."

THE funnel of the Blue Funnel Line, blue with a black top, is well known out East; its happy hunting-grounds are east of Acheen Head. "Blue Funnel" is the pet name of the Ocean Steamship Company, of Liverpool, owned by the Holts, and, with its 46 ships, aggregating 315,000 tons, it is the largest private-owned company in the world, but, as if that was not enough, it has recently added to itself the 25 ships and 17,500 tons of the "China Mutual" S.N. Co. Thus it has a large fleet, and the treatment of the sailors is of public importance. When I went down to the Royal Albert Docks to see the *Achilles* she had just completed her maiden voyage. (I had a little difficulty in finding Messrs. Holt's office, and I got a bystander to lead me to it, who, being given a sixpence, surprised me by remarking, "Now I can get something to eat," for I had supposed that all men inside the docks were employed.) Messrs. Holt's representatives were good enough to send me on board with one of their superintendents, who made things easy for me in every way, and showed me everything I wanted to see.

Dimensions and Accommodation.

The *Achilles* is a cargo ship, one of Rudyard Kipling's "big steamers," 11,426 tons gross and displacing 19,500 tons when she is down to her load draught, 32 feet, when she is probably worth £2,000,000. She is 524 feet long and 63 feet wide. Unlike her classical namesake, she is not very fast, but her 14½ knots give her 350 miles a day, a run which many a passenger steamer east of Suez does not attain. Such a ship may be regarded as a huge lighter, containing below the upper deck only the engine-room, storerooms, and the vast holds which are her raison d'être, while the officers and crew live on the upper deck in three groups. The captain, the 6 passengers, the 3 officers, 8 engineers, 4 midshipmen, 4 petty officers, and 7 stewards live in the central superstructure from above downwards; the crew live aft, the 14 A(ble) B(odied) seamen and the four boys in a house on deck, the 49 Chinese engine-room help live on a mess deck just under the upper deck and in the run of the ship—that is, where she is narrowing, fining away, right aft.

First of the superstructure. Above, the captain's cabin, and I was glad to see the captain was well lodged, as his responsibilities and his occupations undoubtedly demand. As his responsibilities increase so should his compensations, and the increased size and value of ships make it possible to give greater comfort to officers and men. Still, some other companies have forgotten this. The officers and passengers (six only) are well lodged and, like the captain, have suitable bath and w.c. accommodation. There are a saloon and a comfortable smoking-room, with a library, from which the crew can get books. There is a midshipman's berth or gun-room for the four apprentices or midshipmen; it is in the port alley-way and has six portholes or scuttles in it, so it is well lighted and can get plenty of ventilation by the help of a ventilating shaft and the air extractors in the alley-way partition or bulkhead. I suppose the height of the "deck-head" or roof is about 9 feet; there is plenty of floor space, and if the other ships of the company are similar there is no unnecessary hardship before the youngster who goes to sea in the ships of the Blue Funnel Line. The company provides them with a decent library, half of it technical, half of it literary and entertaining, and, if I may judge by the lunch I was kindly allowed to share on board, there is nothing wrong with their food. The four petty officers

[1] Previous articles describing the accommodation on the *Aquitania*, the *Olympic*, and the *Imperator* appeared in THE LANCET of Sept. 11th (p. 569), 25th (p. 666), and Oct. 9th (p. 760), respectively.

have each a comfortable cabin, with a bunk, chest of drawers under that, a fixed basin, settee, &c., two scuttles probably, and plenty of space. I should say here that the ship is steam-heated throughout, and that everywhere attention is given to ventilation. The stewards have similar accommodation, and there are usually two in a cabin. At the after part of the superstructure is the hospital, which I refer to later.

Crew's Quarters.

Aft is the accommodation for the crew. Dr. W. Hanna, of Liverpool, in his Report on Marine Hygiene (Tinling, Liverpool, 1917) has stated the great increase in comfort the men have when their accommodation is shifted to the after end of the ship. Forward they are exposed unsheltered to the weather and the sea, aft they have the superstructure as a defence, they are a little protected from the wind, and they are never so ferociously attacked by the waves. In bad weather with a head sea it is hard to reach a forecastle, and the weight of water that may come on board prevents the builders from fitting a skylight in forecastles, and often stops all ventilation; for the same reason the round glass ports or scuttles must be very small and the forecastle messes consequently very dark. As a further result it is hard to get food to a forecastle in bad weather, nobody can hope to get hot water for washing, scarcely a fire if the weather is cold, even bitter, no clothes once wet will dry, and as there is more motion here than anywhere in the ship there is more discomfort. Further, a forecastle is always the most dangerous place in a ship whose greatest risks are collision and grounding. For all these reasons the men gain by being berthed aft. I have always felt it is particularly cruel to make sweating firemen, fresh from a hot engine-room watch, pick their way in the dark, in bad weather and perhaps in snow, over an upper deck of unsheathed iron, to their quarters in the bows. Another thing, the forecastle is under the eye of the officer of the watch at sea. He demands darkness that his eye may be able to pick up the faint lights of coming ships: consequently the men cannot have lights on deck. This difficulty is evaded when the men are berthed aft, and can make themselves comfortable on the upper deck in the evening like passengers.

Mess and Wash Places.

In this ship the A.B.'s have two-berth commodious cabins, each with a port, and these open into a mess-room with a skylight over it. The first cabins for seamen I ever saw were in a Blue Funnel boat in the Pacific ten years ago, those were small compared to these; but I understand the men have not yet evolved a sanitary conscience and do not yet keep their own cabins clean. There are three short-hopper w.c.'s for sailors, of course unused when I was on board in the Albert Dock; again no paper supply, and each hopper apparently full of newspaper. The six boys have a mess place and sleeping places of their own, which is a comfort for everyone. In addition there is a cement-floored wash-place for sailors and another for firemen, and in each an overhead douche of fresh water, and rings to hold washing basins. Years ago I heard that the Holts had put tip-up wash-basins (as in troopers) into one or more of their ships for the sailors, but these novel fittings were misused and had to be taken out; still, year by year domestic standards are raised and one must not be weary in well-doing. Conditions in the Merchant Marine are changing, but the new English seaman does not yet take the pride in his ship that his predecessors did. Perhaps that is because passages are shorter, and his attachment to the individual ship is more brief. Time will show.

The 49 engine-room ratings are Chinese, and live on the deck below. I have no doubt their accommodation is up to Board of Trade standard. It was certainly the most commodious I have seen for Asiatics; I wish there had been a skylight overhead. I think that could be planned; and the centre of the mess place was dark. Chinese are very clean, yet I have known them bring bugs on board, and light is needed to keep insects hunted down. They have wooden bed-places, and here, as elsewhere, there is steam heat. As they are aft the scuttles are much larger than if they were forward, and there is more light. I would like to see artificial ventilation. One is so grateful for the generally increased comfort of the personnel all over that one feels inclined to put no more burdens on Messrs. Holt just now. But that is not the proper spirit. The more they do for the health of their men the better work these do for them. The Chinese latrines appear excellent. The men squat over channels, glazed earthenware, laid sloping in cement with a flush at the upper end of each, precisely, I think, what Dr. Hanna in his book desired. Similar latrines are provided also in case the ship shall carry Eastern pilgrims or emigrants, men or women.

The Hospital.

The hospital on the superstructure has eight beds in two tiers, there are also a two-tiered isolation cabin, a bath, and a water-closet. There is also a hospital cabin with two beds for women. That makes in all 12 hospital beds.

It will be evident that in this large ship there is better accommodation for the men than in any English merchantman I have seen, and that is a credit to the Ocean Steamship Company. The only hygienically distressing experience I had was to find that the nearest latrine available ashore for the ship's company of *Achilles*, her own latrines being closed in dock, was some 200 yards away, and across eight lines of railway. This, however, concerns the Port of London not the Ocean Steamship Company.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Interesting Lectures During the Winter Term.

THE names of a number of unusual topics appear in an appendix to the syllabus for the winter series of lectures to be given at the University of Vienna. Their selection proves that those responsible for the arrangement of the lectures devote their attention more to the quality than to the quantity of the subjects dealt with. It will be interesting even to those who do not frequent these classes to learn that, for instance, a class for graduates will be held in General Cytology and Comparative Histology for Botanists and Zoologists; another deals with Pathological Histology of the Endocrine Glands. Modern Pharmacology and Physical and Colloid Chemistry will be explained in a series of lectures. Dr. Schütz lectures on the Elements of Mineral Therapeutics, whilst the importance of diet is elucidated by lectures on Diet and Kitchen, with practical exercises of feeding. The Psychology of Stammering and Sexual Maturity and Pathology, as well as Psychically Abnormal and Criminal Children, and Experimental Pharmacology of the Genital Organs as the Basis of Treatment of Sexual Diseases, are lectures sure to attract much attention. Other classes dealing with Parasitology of the Eye, Pathology of the Eye-pupils, or the Connexion between Patho-psychology and Philosophy, are also typical of the kind of scientific work now being conducted in Vienna.

The Yellow Cross: An Ideal Arrangement for Public and Doctor.

The profession has watched closely the rapid development of an institution which at its beginning some five years ago included a small proportion of civil service men only; the aim of the latter was "to insure against the risks of illness by paying moderate premiums." The promoters of this movement from the very outset asserted that they meant to reconcile the needs of the patients with the necessities of the doctor; after patient and persistent work they have approached the organisation of the medical profession with the following propositions: (1) That doctors should themselves become members of this institution, called the "Yellow Cross," and thus become interested in the welfare of it. The institution undertakes to insure against illness, operations, and convalescence by

modest premiums, in such a way that the insured person will, in case of illness, have his expenses paid up to 3000 kronen, or to a multiple of that sum, according to the number of "units" he has insured, the unit being 3000 kronen. (2) That a member may insure himself against any illness or operation whatever, a certain sum being specified for every conceivable variety likely to occur. In case of tuberculosis or convalescence after other diseases, the stay in a nursing home or a sanatorium is also covered up to a point by the insurance. The Yellow Cross has made arrangements with a number of hospitals and sanatoriums for its members to be received at greatly reduced rates, so that the amount claimable represents a period longer than normal. In other repects the patient is perfectly free to select his hospital or his medical adviser; he is only bound to send in the bill of the doctor and the hospital for payment. If these are less than the sum he insured for the patient does not, of course, receive the difference; if they amount to more he has to find the balance.

This system is, in fact, an ideal one from the point of view of the profession as well as of the public. Nowadays a case of prolonged illness or an operation is a catastrophe for middle-class people of this country. Whilst their income rarely exceeds 60,000, and barely ever touches 100,000 kronen a year, a stay of, say, a fortnight in a private hospital or convalescent home cannot be averaged at a lower expenditure than 7000 to 8000 kronen. If an operation be necessary it sends the figure up to 10,000–15,000 kronen, the equivalent of 15 to 25 per cent. of the whole income of the family. Middle-class people—State officials, brain-workers, small shopkeepers, teachers—have recently in many cases been unable to afford to call in a doctor, being forced to apply for medical help at a general hospital, with resulting loss to the private practitioner. The difference of treatment and surroundings in public hospitals from what these people are accustomed to involved a large amount of mental or moral suffering. But by the methods of the Yellow Cross, based on purely mercantile but sound insurance principles, all this is done away with, because small yearly premiums, payable for 10–25 years, enable the middle-class patient to have his ailments treated as in pre-war times. Medical men gladly accepted the propositions of the Yellow Cross, and stoutly advocated these principles, which enable them to retain their circle of patients and keep the latter from falling into pauperism or depending on the "Krankenkasse" or panel system. Very exhaustive investigations, conducted by competent men on behalf of the organisation, showed that the principles underlying the Yellow Cross are perfectly safe and reliable; and nearly all Vienna doctors are now themselves insured therein. This novel departure, if once proved to be sound and in good working order, will no doubt make its way all over the country; it provides the key to future development of medical practice.

Instructions for Midwives concerning Ophthalmia Neonatorum.

By an Order of the Board of Health all midwives working in Austria have received new instructions regulating the care of the eyes of the new-born. Every midwife must have a regular "labour outfit" containing the usual implements—enemas, sterile tape, scissors, vaseline—and also a bottle with 10 g. of acetate of silver, bearing the label "drops for the protection of the eyes." In every case of childbirth "managed" by her she has to instil 3 drops of this liquid into the eyes of the new-born baby, explaining the reason to the parents. If the latter object she may abstain from doing so, but the fact of their refusal must be stated in the record of each birth which she makes to the magistrates. Parents who do not permit instillation are warned by the magistrates as to the danger their offspring incurs. These measures are necessary on account of the alarming spread of gonorrhœa amongst the lower classes of the population, noted in the clinics and ambulatories for sexual and female diseases.

Restriction of the Use of Ambulatories.

The medical organisation extends its fight for decent living for practitioners by measures going deeply into the present system of hospital treatment. On and after Dec. 1st all members of Krankenkassen will be refused treatment in public out-patient departments, ambulatories, and hospitals, except in case of emergency, first-aid, or unless they show a letter of introduction from their panel practitioner requesting treatment or advice. The organisation requests, or orders, all doctors working in such institutions to comply with the following rule: "Hospitals and ambulatories are intended only for free treatment of such persons as are either paupers, or unemployed, or for whom no other person or corporation is bound to provide medical help." This aims at forcing the Krankenkassen, the municipalities, factories, &c., to contract with doctors for treatment of their employees, to appoint an adequate number of specialists and thus enable practitioners to earn their living in a decent way, without taking away patients from the requirements of clinical teaching.

Nov. 8th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Charity Control.

IN the Victorian Legislature the Treasurer introduced a Bill proposing to place the control of charitable organisations under the direction of an official to be styled Director of Charities and an honorary Board of 12 advisers appointed by the Government. This organisation was to be given very wide powers, including that of closing institutions considered unnecessary, and substitution of the funds of one charity to the support of another if considered more desirable. It was also vested with power to veto all public collections, or efforts to collect money for charities, unless made with the express approval of the Board. And it gave discretion to distribute the annual charitable grant voted by Parliament. In addition there were clauses empowering the Minister to "establish and wholly maintain intermediate hospitals." The Bill met with strong disapproval from almost every hospital committee in Victoria, and was viewed askance by the medical profession as regards the intermediate hospital proposals. One of the leading daily papers denounced the Bill as designed to obtain political control of hospital management, and instituted such a successful opposition that it was shelved prior to its second reading. The Lawson Government proposes to reintroduce the measure into the new Parliament, if still in power after the general election to be held next month. Meanwhile it will be re-drafted to bring it into line with some of the more generally expressed opinions as to requisite amendment. While the treasurer may be credited with a genuine desire to improve the present control of charity, there is no question that the Bill contained a number of provisions framed to placate the Labour Party: and the intermediate hospital clauses were designed to compel the medical profession to provide hospital treatment for a lump sum to be charged with the maintenance fees. The late Victorian Parliament has shown a very hostile attitude to the medical profession since the British Medical Association declined to submit the dispute with the Friendly Societies to arbitration.

Australian Army.

The Commonwealth Government has introduced a Defence Bill providing for the creation of a permanent Australian Army, which is to have a peace establishment of 130,000 men. No particulars are at present available as to the medical service to be created. The present Director-General of Medical Services is Surgeon-General G. Cuscaden. Surgeon-General Sir Neville Howse, who had the direction of the Australian medical services in France, preferred on his return to Australia to resume private practice at Orange, N.S.W., but it is possible his direction would again be sought in the event of the Bill becoming law. At

present it is opposed by the Labour leaders, but the Hughes Ministry has an assured majority.

British Medical Association Overseas.

The Federal Council of the B.M.A. in Australasia has considered the proposal to send a representative to the Conference to be held next year between British Medical Association branches to determine the practicability of altering the constitution in the direction of giving overseas branches a greater autonomy. It was decided to recommend that a delegate be sent and that a fund for expenses should be guaranteed by the State branches. It is probable that this recommendation will be accepted and that Dr. R. H. Todd, of Sydney, will be asked to fill the post of Australian representative.

Australasian Universities.—Medical Politicians.—Post-graduate Teaching.

A conference of representatives of the different State Universities was held in Sydney on August 31st. The main result arrived at was a recommendation to increase the period of medical study from five to six years. This was not unanimous, but all present were agreed as to the advisability of adding two extra terms to the present curriculum. There are about 600 students in the medical school at Melbourne alone.

For many years in Victoria there has been no medical man in the State Legislature. Recently Dr. J. Harris was elected to the Legislative Council; and at the forthcoming general election Sir James Barrett and Dr. Stanley Argyle are rival candidates in the Nationalist interest, and one or other will probably win the seat of Toorak in the Assembly.

A permanent committee has been formed in Melbourne to arrange annual courses of post-graduate instruction. It is made up of representatives of the teaching hospitals and the University. The first course under its direction has been fixed for the first fortnight in November, and a varied programme has been arranged. An experimental course was successfully carried out last year. Valuable information has been acquired concerning improved procedure, and in future a fee will be charged for the course.

ROYAL MEDICAL BENEVOLENT FUND.

AT the last meeting of the committee, held on Nov. 9th, 27 cases were considered, and £332 voted to 21. The following is a summary of the cases relieved:—

Daughter, aged 57, of M.R.C.S. Eng. who practised in Manchester and died in 1903. Applicant was left unprovided for and earned her living as a nurse until overtaken by ill-health. Is now helped by her sister who is a nurse and who allows her 25*s.* a week; a friend also allows her 5*s.* a week. Rent 14*s.* 6*d.* for one room and fire. Suffers from heart trouble. Voted £12 in 12 instalments.—Widow, aged 61, of M.R.C.P. Lond. who practised in London and died in 1917. Applicant's husband worked for many years in a very poor part of London for the London City Mission and never had a large income and was unable to make proper provision for his wife. Her income is £25 from investments. Up to quite recently she had a post as nurse-companion at £36 a year, but owing to ill-health has had to give this up and is now in great financial distress. Voted £12 in 12 instalments.—Widow, aged 40, of M.R.C.S. Eng. Her husband was in the R.A.M.C. and commuted his pension before his death, which took place in 1915. Applicant has managed until a year ago to earn a living as a singer, but her health has entirely broken down. She has managed to get on recently by selling her piano and by a small grant from the R.A.M.C. Fund, but they cannot give more. Her medical attendant thinks that she will soon be well again and able to earn her living. Is in need of temporary assistance. Voted £15.—L.R.F.P.S. Glasg., aged 73, married. Practised in London. Both himself and his wife, aged 88, have suffered from ill-health for some years. The applicant first suffered from an ulcerated leg which prevented him earning, and all savings were spent. He has now developed cancer of the tongue and is in a desperate condition both from a health point of view and financially. Wife is also bedridden and their only income is the old-age pension, which both receive. Granted £5 a month.—M.D. Lond., aged 51. Practised in London and Western Australia. Married, wife in mental home. There are two children away at school and provided for. The applicant has suffered from paralysis for over ten years, and is quite incapacitated. His net income is only £64 a year, and he requires someone to look after him. Helped four times, £86. Granted £26 in 12 instalments.—The committee also agreed to give each annuitant a Christmas gift of 30*s.* (this will require £266), and a similar gift to over 100 of the grantees. The honorary treasurer will be pleased to receive special donations for these gifts, which do much to assist the recipients to have a happy Christmas, especially in these days of high prices.

Subscriptions may be sent to the honorary treasurer, Sir Charters J. Symonds, at 11, Chandos-street, Cavendish-square, London, W.1.

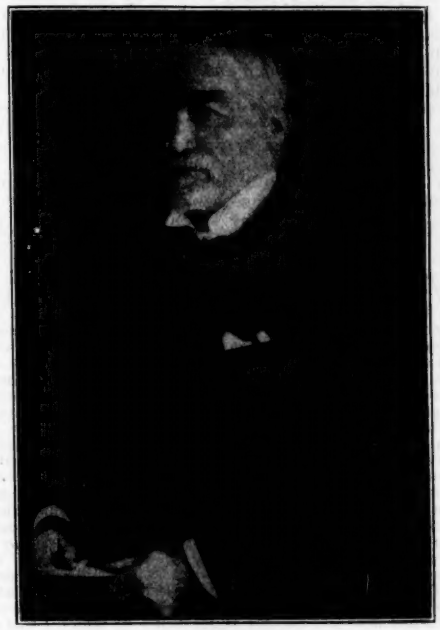
Obituary.

WILLIAM BRUCE, M.A., M.D., HON. LL.D. ABERD., L.R.C.S. EDIN.,

MEDICAL OFFICER OF HEALTH FOR ROSS AND CROMARTY; LATE DIRECT REPRESENTATIVE FOR SCOTLAND ON THE GENERAL MEDICAL COUNCIL.

WE noted briefly in the week of its occurrence the death of Dr. William Bruce, who died at Dingwall on Oct. 24th in his eighty-sixth year, having been in failing health for 12 months. He was a real personality in our profession, and later information which we have received should be recorded.

He was born at Keig in the Vale of Alford, Aberdeenshire, and took a high place in King's College, Aberdeen, and graduated M.A. in 1855 and M.D. in 1858. For 12 years he practised at Crimond, a cold, wind-swept, treeless place on the extreme north-east coast of Aberdeenshire, and even in these early days his mind was at work on more than the routine concerns of general practice and laying-by a store of experience.



WILLIAM BRUCE, M.A., M.D., LL.D. Aberd.

From the beginning of his professional career his thoughts were fixed on preventive medicine; and when in 1864 he founded the second cottage hospital in Scotland it was intended to be a means as much of isolating and accommodating the sound members of an infected household, if circumstances so demanded, as of admitting the patient. At the same time he compensated for the remoteness of his field of work by taking an active part in the formation and support of local medical societies. In 1865 we find him one of the founders and joint secretary of the Northern Medical Society, including the Aberdeen Medical and Surgical, the Buchan, the Garioch, and the Morayshire and Banff.

In 1870 Dr. Bruce moved from Crimond to Dingwall, where he had a wider field for an active mind. In addition to a widespread general practice from the firths of the East Coast to the lochs and islands of the Atlantic, there was the popular sulphur spa of Strathpeffer at his door. It is no exaggeration to say that if Dr. Bruce did not make "The Strath," for it had been known and frequented for generations, he

entirely revived a decaying health resort. Patients, attracted by his personality and skill as much as by the waters, came not as before from the north only but from the three kingdoms. At the same time many professional and public interests were, one after another, committed to his hands. He was physician and surgeon to the Ross Memorial Hospital, planned by himself, chairman of the school board, member of the County Secondary Education Committee, Governor of the Trust for Education in the Highlands and Islands for Ross and Cromarty and chairman of its finance committee, external examiner in medicine in the University of Aberdeen, and a J.P. He was also chairman of the Parochial Officers' Association, and helped by his advice and council to remove many grievances connected with that service. He was a man who laboured untiringly for all that tended to raise and maintain the status of the general practitioner. He upheld the dignity of every qualified doctor, whether "high" or "low"; never spoke a depreciatory word of the skill of anyone; and made it a rule to say nothing in disparagement of the humblest nurse. Gradually he became known throughout Scotland. In 1886 he had what he called "the greatest of all compliments paid him" by being chosen by the profession of all Scotland as its first Direct Representative on the General Medical Council; and this mark of esteem and confidence he retained for a second and a third term of office. In the Council Dr. Bruce proved to be "a general man," interested in everything, taking a calm, sensible view of whatever came before him. Perhaps the educational side of the work of the Council interested him most. He held that the medical student should have a sound general education, and that the curriculum should not be crowded with many specialities. In 1905 he was chairman of the Public Health Committee of the Council. Of his work, position, and character on the Council the President, Sir Donald MacAlister, sends us the following appreciation:

"When Dr. William Bruce retired from the Council in 1907 I spoke of him from the chair as follows: 'In Dr. Bruce the Council loses a member who for 20 years has done much to enhance its reputation for steadfast and careful attention to duty. His knowledge of Scottish conditions was wide and varied. It comprehended the manifold complexities of medical practice, the details of public health administration, and the outstanding problems of professional education, and it enabled him to approach the consideration of the Council's relations to these and like questions with sympathy and insight. His sagacity, his loyalty, and his grave and deliberate habit of mind, which impressed the Council from the first, have procured for him its lasting respect. Few members were heard less and felt more than Dr. Bruce, and those who were brought into closest touch with him, on the public health and other important Committees, are those who most appreciate his value and regret his withdrawal.' During the 13 years that have elapsed since that time Dr. Bruce kept up his interest in the Council's work. I frequently received from him careful memoranda on the subjects discussed by it; and these often contained wise and helpful suggestions by which I was able to profit in the performance of my duties as president. He had the best interests of the Council always in view, and was zealous for its efficiency as an organ of medical administration. He was, moreover, a staunch and true-hearted friend to his friends, a counsellor whom they trusted, and a critic, if need were, whose criticism was worthy of their pondering. For two reasons lately I had the personal advantage of his professional care at Strathpeffer, and I learned to know how he bore himself among his own people of the north. My appreciation of his character and powers was increased by the experience. His vigorous old age manifested all the qualities that had enriched his prime. He leaves a memory of work and influence that will not speedily fade from the minds of his colleagues and friends."

The year 1889 was another land-mark in Dr. Bruce's career. The post of medical officer of health for Ross and Cromarty was open, and his strong inclination to preventive medicine prompted him to fill it, at the sacrifice of a large and valuable general practice in the north, consulting work only remaining. He had now full opportunity and to spare for the application of views on the causes of disease that had occupied his mind since he first faced it in the homes of the poor. Not the mainland only of Ross but the islands of the west coast, including Lewis with its notorious hygienic and social difficulties, were under his administration. Few of the readers of THE LANCET in the South can have a notion of the duties of this appointment. It signified close inspection, study, and reports on the health and diseases of a population scattered over hundreds of square miles—mainland and coast and the Outer Hebrides, the journeys mainly by road or boat. And only those who know something of the Gaelic fishermen and crofters of the Highlands and the condition of their houses can appreciate the prejudices and other obstructions that had to be overcome by him as a sanitary reformer. He met the many difficulties with schemes of radical improvement marked by his characteristic courage and energy, never hesitating to publish them freely and defend them against "interested" objectors. Years of practice amongst the poor had convinced him that disease and poverty are closely interconnected, and that the causes of poverty should be attacked first. How far he was successful or the reverse may be gathered from his annual Reports to the Local Government Board for Scotland. Again, as an advanced thinker, and at the same time an active participant in public education, he naturally selected school children as the most promising material to impress with the benefits of personal hygiene—by provision of proper lavatories and the like and well-ordered regulations. On the local school board and in connexion with the University of Aberdeen Dr. Bruce was an advocate of higher—particularly scientific and technical—education, and was a frequent and recognised correspondent on the subject in the press. He gave evidence before the Parliamentary University Commission, a Commission on Physical Education, and a third on the treatment and education of the feeble-minded. His official responsibility for improvement of the sanitary and social life of the county encouraged a naturally strong interest in the crofter-holdings and agriculture. He was the first to institute, more than 30 years ago, field experiments in Ross-shire, and actively promoted the establishment of a model croft where small-holders could study varieties of corn and other crops growing side by side, with exact records of soil, manures, temperature, and other conditions of cultivation, and the results. At the same time, he was the first to caution the crofters not to trust to such experiments nor forget that the circumstances of their own place might be totally different—that, after all, they must use their own brains. In due course he was elected a governor of the North of Scotland College of Agriculture, being chairman of the Ross-shire Advisory Council, and later he represented the College on the University Senatus.

His contributions to current medical literature were few, and of chief interest to his biographer as evidence of their author's keenness of observation and independence of thought. It deserves to be remembered that he was one of the first to record the occurrence of contagious pneumonia—in 1883 (the year of the discovery of Friedländer's pneumo-bacillus), unquestionably a forward step in the modern pathology of this disease. On August 22nd, 1903, he published in our pages an article on sciatica; and in 1913 there appeared his book on the same subject. He maintained in his own independent fashion that sciatica is not a primary neuralgia or neuritis, but pain referred from disease in the hip-joint. This theory he supported with a record of 600 cases observed by himself at Strathpeffer and a discussion of the anatomical relations of the parts. The work provoked considerable criticism at the time; and with full respect for the memory of its author we may recognise that, while many cases of sciatica may be accounted for on this view, other cases have different origins.

In work and off work Dr. Bruce was an attractive personality, full of life and of interest in life, ever ready to talk—one might say on any or every subject. His chief recreations were reading and gardening. He had a carefully cultivated literary taste and was an omnivorous reader, but only of the best books, his judgment on this subject being generally accepted. His old garden was known far beyond its neighbourhood for its profusion of native flowering plants of every kind in natural settings. Many of his Strathpeffer patients

still remember with pleasure their visits with him to his perennial borders and rose-hedges, as well as his intimate acquaintance with the characters and habits of every plant. But, indeed, there was no limit to the number of his interests. A spirit of inquiry amounting to restlessness and his true liberalism would carry him off on occasion from the remote north to Edinburgh, London, or the Continent. These were no ordinary visits. They had an object, professional or public; and they meant meeting with men of thought and action like himself, privately or officially, where he discussed in his shrewd way some problem of health, education, agriculture or politics. It was in these circumstances that he was recognised to be at his best. In 1898 his Alma Mater conferred on him the degree of LL.D. in recognition of his professional standing.

Dr. Bruce is survived by his wife and the whole of their family of six children. His second daughter is wife of Professor McKerron of Aberdeen; his eldest son is Mr. A. B. Bruce, late of the Indian Civil Service, who now fills an important appointment in the Board of Agriculture; and his second son is Dr. Ironside Bruce. Dr. Mitchell Bruce is his youngest brother.

Correspondence.

"Audi alteram partem."

A UNIFIED TERMINOLOGY.

To the Editor of THE LANCET.

SIR,—I beg the attention of your readers to some proposals for unifying the terms used in the nomenclature of disease which the delegates of Peru presented at the recent International Conference held in Paris to revise the classification of the causes of death. This memorandum indicates that practical medicine might derive advantages similar to those which have long been obtained in chemistry by attaching definite significance to particular terminations.

The proposals made for the purpose are simple and logical. The termination "*itis*" should in all cases be applied to inflammatory diseases; and the termination "*algia*" to painful conditions. All diseases caused by a well-determined bacillary agent should have the termination "*osis*"—e.g., tuberculosis, typhosis, syphilosis, leprosis, &c.—a group which would be added to as knowledge advances. Similarly the termination "*iasis*" should be restricted to diseases caused by parasites, as is already the case with many diseases such as trichiniasis, trypanosomiasis, elephantiasis, &c., this should be extended to paludiasis, acariasis, &c.

It is not proposed to ask for the disuse of terms like small-pox, cancer, diabetes, &c., which belong to the language, but it is suggested that if, for scientific purposes and particularly for purposes of international comparison, an official nomenclature is constructed, it can with great advantage incorporate such simple rules as those which are suggested.

The Conference adopted the terminology suggested as alternatives to the terms at present in use.

I am, Sir, your faithfully,

J. GUILLERMO ARBULÚ.

53, Rue de la Victoire, Paris (IXe), Nov. 21st, 1920.

"HIDDEN SEPSIS."

To the Editor of THE LANCET.

SIR,—Colonel White Robertson's address to the Hunterian Society, reported in your issue of Nov. 20th, and doubtless perused with interest by your readers, calls for a few comments, for which I venture to ask a little of your valuable space.

It is refreshing to find Colonel White Robertson pleading for thorough and combined clinical and laboratory investigation of every individual case of infection as it presents itself, thus emphasising the need for unity in diagnostic methods. The author's insistence upon the importance of tissue susceptibility in chronic infections, and the factors leading to this susceptibility, is also timely. Too often an undue prominence is given to the microbic factor in chronic infective processes, and the practitioner is led to expect fabulous results from therapeutic measures that are directed solely against this factor; and this especially at a time when curative vaccine therapy has a popular vogue somewhat in advance of its scientific achievements.

These general comments of Colonel White Robertson's are therefore excellent reading. But when the author of "Hidden Sepsis" gets down to detail, and when we hopefully await the help of his mature experience, expecting to glean some practical hints that will assist us in our daily efforts to solve the problems of obscure infection, some of us must admit disappointment. We do not feel sure that he is a trustworthy guide. He seems to expect very thin ice to be capable of bearing people whose weight demands thicker stuff, and there are times when it seems doubtful if the water is even frozen over. As an instance of ice that is too thin let me only mention the diazo-reaction, which the author holds to be of positive value in the diagnosis of an "entero-coli" infection, whereas it is probable that, apart from its being of *negative* value in the diagnosis of typhoid fever, it has no other value at all. It is certainly present in many cases of phthisis, meningitis, pneumonia, and scarlet fever. As an instance of water which it is not certain is frozen over let me only mention the Arneth index, to which Colonel White Robertson attaches so much importance in the diagnosis of actual and "latent" tuberculosis. If Colonel White Robertson would, once and for all, demonstrate convincingly to us that the Arneth index bears any more definite relation to infection by the tubercle bacillus than it does to other infections, this contribution to practical medicine would be invaluable.

Did space allow, I might refer to Colonel White Robertson's use of high and low blood pressures, of temperature ranges, of the patient's facies, of the percentage of large mononuclears in the blood picture, and of the appearance presented by a Gram-stained smear of the fæces as guides to differential diagnosis. To most of us the trouble is that these things lack the element of *specificity*, and do but, at most, spell infection or subinfection of some part of the body. (The last-named observation does not necessarily take us even so far as this.) But infection or subinfection *by what?* It is the *specific* test, be it clinical or be it clinico-pathological, that we need for guidance, not the mere sign, nor any number of signs, that interaction is taking place between the tissues and an infecting agent. Non-specific signs we have in comparative abundance, and their number increases yearly; specific tests come but rarely, one in a decade or so, for they are the slow fruit of prolonged and painful endeavour.

I am, Sir, yours faithfully,

Harley-street, W., Nov. 22nd, 1920. THOMAS HORDER.

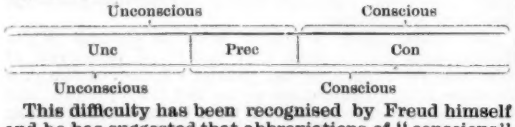
PSYCHICAL REPRESSION.

To the Editor of THE LANCET.

SIR,—May I reply to Dr. H. Yellowlees's note on our Conception of Psychological Repression, appearing in your issue of Nov. 6th, in which he points out that some confusion has arisen from the way in which psychoanalysts have attempted to explain this mental process? The confusion is due to the fact that "conscious" and "unconscious" are terms which, on the one hand, were in common use years before psychoanalysis was thought of, and have a popular meaning; while, on the other hand, they have a very precise psychoanalytical meaning. Nevertheless, for the sake of brevity and simplicity psychoanalysts are liable to use the words in a non-technical sense, especially when addressing an uninstructed audience. They (I should say "we" because I know that I am one of the offenders) try to avoid complicating elementary expositions by reference to a third department of the mind—viz., the "preconscious" sometimes called the foreconscious or subconscious, which is really responsible for the function of repressing intolerable thoughts, memories, and desires into the unconscious.

In Freudian terminology the "unconscious" means that part of the mind which includes all thoughts, wishes, &c., which the person possessing them cannot accept as belonging to himself, of which he therefore does not know and never can know except through some psychotherapeutic device, especially psychoanalysis. The "conscious" comprises all things mental of which we are well aware at or about any moment of introspection. The "preconscious" includes all those mental processes which are "out of mind" at the time, but can be recalled or revived in consciousness with little or no effort. Examples in my own case, while I am engaged in writing this letter, would be the telephone numbers of friends, the Greek alphabet, my summer holiday next year, and the wishes to lead a moral life and to give no offence, either to myself or to other people.

It will be seen that the preconscious serves the functions partly of the conscious and partly of the unconscious. In so far as it is a storehouse for mental constituents which are not conscious, it serves the functions of the unconscious; but in so far as it includes moral, social, and ethical trends which lead to the banishment of intolerable, painful, and unseemly thoughts and wishes into the unconscious, it serves the purposes of the conscious. The consequence is that the preconscious is often included when we use the words "conscious" and "unconscious" in their generally accepted non-technical familiar meaning; and psychoanalysts, being ordinary people as well as psychoanalysts, are liable to use the words sometimes in their restricted technical sense and sometimes in their wider signification. The following diagram may help to make the explanation clearer:—



This difficulty has been recognised by Freud himself and he has suggested that abbreviations of "conscious" and "unconscious" be used when we employ the words in their psychoanalytical sense. His abbreviations are, of course, of the German equivalents, but some British psychoanalysts have taken the hint and speak or write among themselves of the "con" and the "unc". No abbreviation of "preconscious" is required.

I am Sir, yours faithfully,

W. H. B. STODDART.

Cavendish-square, W., Nov. 14th, 1920.

HEREDITY AND TUBERCULOSIS.

To the Editor of THE LANCET.

SIR,—May I suggest, through your columns, to Professor S. L. Cummins that he will find in the "Laws of Heredity" by Sir Archdall Reid, published in 1910, and in other works of that author (including the "Present Evolution of Man," published nearly 25 years ago) a full discussion of this subject. I would refer him especially to Chapters XI.–XIV. and Chapters XXII. of the "Laws of Heredity," where the whole subject of heredity in relation to disease is dealt with at length with great clearness and cogency, and the important consequences of tubercular "selection" are duly traced. The study of those chapters will show that what some writers name "diathesis" is what Reid calls "potentiality," and that thus Reid's exposition of the relation between heredity and tuberculosis is not obscured by the use of the indefinite word "diathesis" which appears too often in medical and other writings.

I am, Sir, yours faithfully,

Nov. 19th, 1920. H. BRYAN DONKIN.

THE SITE FOR INTRAMUSCULAR INJECTIONS.

To the Editor of THE LANCET.

SIR,—In the issue of THE LANCET of Oct. 16th I noted a letter with this title from Mr. Grey Turner, of Newcastle, suggesting that the site of choice for intramuscular injections should be into the vastus externus. While admitting that this position is most convenient and safe, I find by personal experience and by report from patients that temporary disability owing to pain and stiffness may prevent the victim from following out his occupation for some days.

In my own case I used collosol manganese and found that in walking the pain at each step was almost sufficient to prevent locomotion for three days and a period of partial limitation for nearly a week. Whilst admitting that the collosol preparations are, perhaps, more irritating than other injections, I maintain that in the case of the worker who has to earn his daily bread that the vastus externus is not so accommodating as the usual buttock location; but if the patient be in bed or in circumstances which will allow complete rest, then I admit all the advantages Mr. Grey Turner claims for this unusual site.

I am, Sir, yours faithfully,

Barry, Nov. 22nd, 1920. R. ECCLES SMITH.

TRANSPERITONEAL NEPHROPEXY.

To the Editor of THE LANCET.

SIR,—I have read with great interest in your report of the Section of Urology, R.S.M. (Nov. 6th, p. 949), Mr. Victor Bonney's paper upon Transperitoneal Nephropexy, because I recently had a case of displacement of the kidney into the pelvis upon which I did a similar operation.

The patient was an unmarried girl, aged 24, and was admitted into Chalmers Hospital on Nov. 11th, 1919, suffering from painful and frequent micturition. Vaginal examination revealed the presence of a normal-sized uterus, with a cystic swelling to the right and a firm swelling to the left and behind. I opened her abdomen on the 13th and found a right ovarian cyst and the swelling to the left of the uterus was the left kidney, and it was lying with its upper pole just projecting above the brim of the pelvis, and was slightly smaller than normal. After removing the right ovary and the appendix I incised the peritoneum over the left kidney, separated the adhesions, and pushed it up under the parietal peritoneum until it was lying just with its upper pole at the level of the last rib. Before closing the abdominal incision I incised over the kidney in the lumbar region and stitched it to the muscles by three sutures.

The patient made an excellent recovery and the kidney can now be palpated and is quite immovable. All her previous symptoms have disappeared.

I am, Sir, yours faithfully,

Banff, Nov. 13th, 1920. W. MANSON FERGUSSON.

THE SURGERY AND A SPECIAL WATER-RATE.

To the Editor of THE LANCET.

SIR,—A case was recently brought to the notice of the Council of the Medical Defence Union which is of considerable importance to the profession. A member who dispenses his own medicines discovered that he was being charged a special water-rate in respect of his surgery. After considering the position carefully and taking counsel's opinion the Council decided to fight the case, and invited the water company to take police-court proceedings against our member in order that a case might be stated for the High Court. This the water company declines to do, as it appears that their present functions will be taken over next March by the City corporation under a new Act of Parliament. Meanwhile, the claim against our member is not being proceeded with; but as it is probable that a similar charge is being made on other dispensing doctors, possibly without their knowledge, it is hoped they will carefully examine any demand they receive for water-rates, and will resist payment of any special rate levied in respect of their surgeries.

The Union is determined to contest the point wherever any member is victimised in this way.

I am, Sir, yours faithfully,

JAMES NEAL,
General Secretary, Medical Defence Union.

4, Trafalgar-square, W.C., Nov. 22nd, 1920.

LORD MAYOR OF BRISTOL'S HOSPITAL SUNDAY FUND.—The annual report of this fund shows that the sum collected during the past year exceeded any previous total by nearly £1000 and amounted to £6028 6*s.* 9*d.*

Medical News.

UNIVERSITY OF OXFORD.—**The Dale lectures will be delivered at Mansfield College by Dr. J. A. Hadfield on the Contribution of Psychotherapy to Ethics and Religion.**

Mr. A. A. F. Peel has been elected to an Honorary Scholarship in Medicine at University College.

Diploma in Public Health.—The following passed in Part I.: Charles Norman Atkins, Ina Marion Clarke, William Victor Corbett, Mohamed Khalil Abdel Khalik, George William Ronaldson, Reginald Hugh Simpson, and Arnold Viney.

The following passed Part II. and obtained the diploma: Henry Murray Agnew, Charles Norman Atkins, Thomas Clive Backhouse, Charles Leslie Browne, Frederick Churchill Davidson, Alma Percy Ford, Mohamed Khalil Abdel Khalik, Claude Kingston, John Stephen Moore, and Reginald Hugh Simpson.

The following awards of Theodore Williams Scholarships have been made:—In physiology: W. R. Brain, B.A., New College; in human anatomy: A. A. F. Peel, University College; in pathology: G. T. Kerr Cross, St. John's College.

UNIVERSITY OF LONDON.—**At examinations held recently the following candidates were successful:—**

THIRD (M.B., B.S.) EXAMINATION FOR MEDICAL DEGREES.

David William Jabez Andrews, Middlesex Hosp.; Cyril Carlyle Beatty, London Hosp.; Gilbert Blurton, Birmingham Univ.; George James Bowen, St. Thomas's Hosp.; John Vernon Cannadine Braithwaite, Guy's Hosp.; Loswel Israel Braun, St. Bart.'s Hosp.; Harold George Broadbridge (honours, distinguished in forensic medicine), London Hosp.; Frederick Charles Sedgwick Broome (honours, distinguished in surgery), Guy's Hosp.; Leslie James Forman Bull, St. Bart.'s Hosp.; Octavius Cyril Carter, London Hosp.; George William Cheater (honours, distinguished in forensic medicine), Charing Cross Hosp.; Maurice Coburn (honours, distinguished in surgery), Guy's Hosp.; William Edward Kyte Coles, Univ. Coll. Hosp.; Florence Edith Coombes, London Sch. of Med. for Women; Frederick Hugh Lester Cunningham and Robert Cecil Davenport, St. Bart.'s Hosp.; Thomas Reginald Davies, St. Mary's Hosp.; John Joseph Philip de Chaumont, Charing Cross Hosp.; John Ralph Dingley, Univ. Coll. Hosp.; James Daniel Dyson, Middlesex Hosp.; Harold Ellis, St. George's Hosp.; Raymond Eustace Ford, Sheffield Univ.; Richard Kenrick Foulkes, King's Coll. Hosp.; Gerald Francis Petvin Gibbons (honours, distinguished in midwifery), St. Bart.'s Hosp.; Edmund Douglas Granger, St. Thomas's Hosp.; Algernon Sanders Green, Univ. Coll. Hosp.; Edith May Hall (honours, distinguished in midwifery) and Hilda Treloggen Haggett, London Sch. of Med. for Women; Ranald Montagu Handfield-Jones (honours, distinguished in surgery and midwifery, university medal), St. Mary's Hosp.; Walter Anley Hawes and Eric Clark Hinde, Guy's Hosp.; John Basil Hume (honours, distinguished in medicine), St. Bart.'s Hosp.; Michael Harry Kirkpatrick Kane and Robert Percival Langford-Jones, Univ. Coll. Hosp.; Horace Sharman Le Marquand, St. Thomas's Hosp.; Gdal Leizer Levin, Univ. Coll. Hosp.; Gordon Parmiter Lindsay and Vernon Edmund Lloyd, Guy's Hosp.; Charles Titterton Maitland, Richard Glyn Morgan, and Christopher Wesley Narbeth, St. Bart.'s Hosp.; Walter Ernst Karl Adolf Quitmann, Univ. Coll. Hosp.; Owen William Roberts, King's Coll. Hosp.; Theodore Ernest Roberts (honours, distinguished in medicine and surgery), Glasgow Univ.; Ernest Livingstone Sergeant and Robert Gordon Simpson, London Hosp.; Arthur Cleve Damien Telfer (honours, distinguished in forensic medicine), St. Bart.'s Hosp.; Beriah Melbourne Gwynne Thomas and Charles Hamblen Thomas, St. Bart.'s Hosp.; John Oscar Thomas, King's Coll. and Westminster Hosps.; William Thomas, St. Thomas's Hosp.; Raphaël Thursz, King's College Hosp.; Mark Tree (honours, distinguished in medicine), London Hosp.; John Ernest Alfred Underwood, Univ. Coll. Hosp.; Noel Sydney Bailey Vinter, St. Bart.'s Hosp.; Dorothea Compston Wigfield, London Sch. of Med. for Women; Oscar Williams, (honours, distinguished in medicine), Univ. Coll., Cardiff, and Univ. Coll. Hosp.; Lucy Wills, London Sch. of Med. for Women; and Jacob Elias Zeitlin, London Hosp.

The following candidates have passed in one of the two groups of subjects:—

Group I.—Girdhar Clement Agarwala, London Hosp.; Harold John Blampied, St. Thomas's Hosp.; Philip Nield Cook, St. Bart.'s Hosp.; Ronald Benjamin Green, Univ. Coll. Hosp.; Gwenvron Mary Griffiths, London Sch. of Med. for Women; Kathleen Harding Matthews, London Sch. of Med. for Women and St. Mary's Hosp.; James York Moore, Guy's Hosp.; Arthur Hywel Richards, St. Mary's Hosp.; Leslie Muir Smith, Guy's Hosp.; Idwal Glynne Williams, St. Bart.'s Hosp.

Group II.—James Reid Banks, Univ. Coll. Hosp.; Frank Montague Barnes, St. Thomas's Hosp.; Arthur Bearblock, Univ. Coll. Hosp.; Edward Vincent Beaumont, St. Mary's Hosp.; Eric Vere Corry, Univ. Coll. Hosp.; Elsie Eleanor Cowperthwaite, London Sch. of Med. for Women and St. Mary's Hosp.; Llywelyn ap Ivan Davies, Univ. Coll. Hosp.; James O'Farrell Fletcher, St. Mary's Hosp.; Ada Marion Freeman, King's Coll. Hosp.; Isaac Frost, St. Bart.'s Hosp.; George Franklin Wise Howorth, Middlesex Hosp.; Teresa Jadwiga Iyer, London Sch. of Med. for Women; Eugene Henry Leon Le Clezio, Guy's Hosp.; Iorwerth Hubert Lloyd-Williams, Middlesex Hosp.; Gladys Matthews, London Sch. of Med. for Women; Sybil Gertrude Overton, London Sch. of Med. for Women and St. Mary's Hosp.; Henry Norman Pritchett, Guy's Hosp.; Samuel Sacks, London Hosp.; Charles Herbert St. John, Guy's Hosp.; Bryan Buckley Sharp, St. Bart.'s Hosp.; Katherine Jane Shaw, London Sch. of Med. for Women; Lionel Frederick Strugnell, St. Bart.'s Hosp.; Norah Edith Trouton, St. Mary's Hosp.; and Wilfrid Conrad Stanley Wood, King's College Hosp.

COLONIAL EXAMINATIONS: SECOND EXAMINATION FOR MEDICAL DEGREES: PART I.

Ceylon (Colombo).—Vincent Ploris de Zoysa, private study; and Llewellyn Chandradasa Gunasekara, Milroy Aserappa Paul, Namasivayam Sinnadurai, Kandiah Somasundaram, Kanthiah Vaithianathen, Wilfred Charles Wickremesinghe, and Gnanasakaram Wignaraja, Ceylon Medical College.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—An ordinary meeting of the Council was held on Nov 11th, Sir Anthony Bowlby, the President, in the chair.—A report from the Court of Examiners respecting candidates found qualified for the Diploma of Member was read and it was resolved that the Diploma be granted to 88 candidates mentioned in the report.—The President stated that a vacancy on the Court of Examiners occasioned by the retirement of Mr. H. J. Waring would be filled up at the next meeting of the Council in December.—A letter from Sir Charles Ballance was read announcing his resignation as the representative of the College on the Senate of the University of London. It was resolved that the vacancy caused by this resignation would be filled at the next meeting of the Council in December.—Sir D'Arcy Power, Mr. Charles Ryall, and Sir John Lynn-Thomas were nominated to represent the College on the occasion of the centenary celebrations of the French Academy of Medicine to be held in Paris during the second fortnight in December.

THE FEDERATION OF MEDICAL AND ALLIED SOCIETIES.—At a meeting of the Executive Council of the Federation held at 11, Chandos-street, W., Sir Malcolm Morris in the chair, the general secretary reported that the General Purposes Committee had been in touch with two prospective medical candidates for Parliament: Dr. Harry Roberts, who was standing for Stepney East in the Labour interest, had already met the committee, and Miss Sophia Jevons, M.B., who is standing as an independent candidate for the University of London at the next election.

A General Purposes and Finance Committee was appointed for the ensuing year, consisting of the following: Sir Malcolm Morris (Chairman), Dr. Arthur Latham, Sir Thomas Horder, Dr. C. Buttar, Sir John MacAlister, Mr. P. F. Rowsell, and Dr. Jane Walker. Dr. N. Howard Mummery was unanimously reappointed general secretary, the Chairman paying generous tribute to the services which he had rendered, a view cordially endorsed by the meeting. Miss M. Parker was reappointed for the ensuing year as assistant secretary, and the general secretary was empowered to engage the part-time services of a clerk for temporary duty as the exigencies of the office work might make necessary.

UNIVERSITY OF MANCHESTER.—**At the annual** meeting of the Court of Governors, held recently, it was stated that the number of students now was nearly the same as a year ago—2788 in all. Of these, 503 were in the Faculty of Technology; 629 were women. The total also included 1100 ex-Service students who were either beginning or continuing their University course with the help of grants from the Board of Education. The great rush of students which set in after the war had not yet subsided, and in all faculties there were great difficulties as regards rooms and space for staff and students. The number of students in the chemistry department was almost overwhelming; by reconstruction in the Medical School additional space was obtained for several departments. The stringent step of increasing class fees by 25 to 30 per cent. to meet obligations had been taken, and this had not provoked any violent protest from the parents of the students. The income of the general fund had increased by £37,000—from £88,000 to £125,000; the expenditure, however, had gone up from £89,700 to £134,000, an increase of over £44,000. The chief source of increase in the income was £21,000 from students' fees; and the principal cause of the increased cost was an addition of £19,500 to the stipends of the staff. The public appeal for £500,000 made over a year ago had not reached its objective yet, only £218,000 so far having been subscribed. The appeal fund had thus added only £20,000 to the income. Whilst a few councils in adjacent towns had substantially increased their annual grants to the University, the Manchester City Council was granting no more than the £4000 it gave before the war, when money was worth a great deal more. It was stated that it would now be necessary to advance the fees charged for work done at the Public Health Laboratory by about 50 per cent.

A committee of ladies has been formed to organise a bazaar in aid of the appeal fund, to be held in November, 1921, with the object of raising £20,000. Large sums are needed to provide new residential accommodation for students, to add to the Union buildings, and for other purposes primarily affecting student life and its amenities at the University.

EPSOMIAN CLUB.—**The annual dinner of this** club will be held at the Trocadero Restaurant, Piccadilly Circus, London, on Thursday, Dec. 9th, at 7 P.M., under the chairmanship of Dr. H. A. Kidd. The annual meeting of the club will precede the dinner at 6.30 P.M. Communications to Mr. Edred M. Corner, 37, Harley-street, Cavendish-square, London, W. 1.

UNIVERSITY COLLEGE HOSPITAL MEDICAL SOCIETY. The annual dinner of this society will be held at the Criterion Restaurant on Monday, Dec. 13th. All old members are invited to attend. Tickets can be obtained from Mr. G. O. Montgomery, the honorary secretary, at University College Hospital, London, W.C.

AUXILIARY ROYAL ARMY MEDICAL CORPS FUNDS. —The usual quarterly committee meeting was held on Oct. 29th. The Funds are for the relief of widows and orphans of commissioned officers, non-commissioned officers, and men of the rank and file of the Royal Army Medical Corps, Special Reserve, Territorial Force, and New Armies, and also for the relief of those who have been so severely damaged in the late war that they need help for the education of their children. In the Benevolent Branch 18 grants, amounting to £601 in all, were made to the orphans of officers, and in the Relief Branch 52 grants, totalling £1510, were allotted to widows and children of the rank and file. Requests for relief should be addressed to the honorary secretary, at the offices of the Funds, at 11, Chandos-street, Cavendish-square, London, W. 1.

INSTITUTE OF PHYSICS.—**It is announced that** this institute has now been incorporated and has begun to carry out its work. The object of the institute is, on the one hand, to secure the recognition of the professional status of the physicist, and, on the other hand, to coördinate the work of all the societies interested in physical science or its applications. This coördination has already been secured by the participation of five of these societies—namely, the Physical Society of London, the Optical Society, the Faraday Society, the Royal Microscopical Society, and the Rontgen Society. The first list of members includes the names of over 200 Fellows. Sir J. J. Thomson, the retiring President of the Royal Society, has accepted the invitation of the Board to become the first and at present the only Honorary Fellow. The first president of the institute is Sir Richard Glazebrook, F.R.S., who will preside at the first statutory meeting of the institute, to be held early in the new year. Particulars with regard to the qualifications required for the different grades of membership can be obtained on application to the secretary, 10, Essex-street, London, W.C. 2. Fellows elected before May 1st, 1921, will have the privilege of being styled Founder Fellows.

CHILD STUDY SOCIETY.—**At a meeting of the** society on Nov. 18th Dr. James Kerr presided, and Dr. F. G. Crookshank read a paper on the Anthropological Study of Mongolian and other Defectives, illustrated by lantern slides. After pointing out the occurrence in England of various ethnic types of defectives described by Robert Chambers in 1835 and Langdon Down in 1865 in their respective theories of human origin, the lecturer said that though a type of Mongolian imbecility is recognised by physicians, the homologies between these and other types are not so generally admitted. That such homologies do exist[1] Dr. Crookshank maintains, and he showed a new and interesting series of lantern slides indicating the homologies obtaining in respect of posture between Mongolian imbeciles, racial Mongols, and orangs; between cases of dementia præcox, primitive Indo-Aezans and chimpanzees, and between negroes and gorillas. He also maintained that the only hypothesis of human descent reconcilable with those homologies was such a polyphyletic one as that of Klaatsch, or some modification thereof.

Dr. F. C. Shrubsall thought to find an explanation of different types of mental defect in a derangement in the balance of the various internal gland excretions. Dr. Crookshank replied that acceptance of the theory accentuated rather than diminished the importance of the homologies described, and maintained that while such a theory needs more precise definition, it does not, unless combined with some hypothesis involving questions of heredity and descent, really explain either the occurrence of sporadic mental defect or the persistence of the recognised human and anthropoid races. He explained that what was necessary for the better comprehension of phenomena around us was the free examination of all relevant hypotheses.

[1] Dr. Crookshank has already outlined these theories, vide the Universal Medical Record (1913), and the Proceedings of the Royal Society of Medicine, Section for the Study of Disease in Children, 1913, vol. vi.

MEDICAL EXAMINATION OF TEACHERS IN ELEMENTARY SCHOOLS.—**At the last meeting of the Devon Education** Committee it was reported that in one of the districts there were 49 per cent. of defective children. It was suggested that it would be wise if teachers were medically examined periodically as well as on entering a school in order to ascertain whether they might not unconsciously be carriers of disease. The committee decided to instruct the medical officer to make periodical examinations of the teachers.

DONATIONS AND BEQUESTS.—**The Chelsea Hos**pital for Women, London, has received from the Goldsmiths' Company a grant of £50 towards the building of its nurses' home. A sum of £8000 is now in hand, and £20,000 more are required.—The late Mr. Jesse Howarth under his will bequeathed £30,000 for the extension of the museum building attached to the University of Manchester, which was opened in 1912 and bears his name.—Mr. James Brooks, of Werneth, Oldham, bequeathed £2000 to Oldham Royal Infirmary to endow a bed and for general purposes of the infirmary, £100 to the Workshops for the Blind, and £250 for the Deaf and Dumb Institution, Oldham.—Miss Margaret Gerard, of Bristol, formerly of Withington, left £11,185, directing that after the payment of certain legacies the residue is to be divided between the Royal National Lifeboat Institution, the United Kingdom Beneficent Association, Manchester Royal Infirmary, Manchester Children's Hospital, and the Bristol General Infirmary.—Charitable gifts left by the late Empress Eugènie include 50,000 fr. to the Société des Amis des Soldats Aveugles de la Guerre, Paris; 25,000 fr. to the English Society for the Blind of the War; 50,000 fr. to the Convalescent Home at Vincennes founded by Napoleon III.; 20,000 fr. to the French Hospital in London; and 20,000 fr. to Queen Mary's Auxiliary Hospital at Roehampton.—The late Mr. Edward Alfred Broome, J.P., D.L., of Areley Court, Stourport, Worcester, has left £200 to the Kidderminster Infirmary and Children's Hospital.—By the will of the late Mr. Thomas Leonard, D.L., of Warrenstown, Dunsany, co. Meath, the testator left £10,000 to the Mater Misericordiæ Hospital, Dublin, and £10,000 to the Royal Hospital for Incurables.—Under the will of the late Miss Elizabeth Wood, of Lancaster, the Royal Lancaster Infirmary will receive £1000.

CENTRAL MIDWIVES BOARD.—**A special meeting** of the Board was held at Queen Anne's Gate Buildings, Westminster, on Nov. 17th, with Sir Francis H. Champneys in the chair. Several midwives were struck off the roll, the following charges amongst others having been brought forward:—

A midwife neglecting to take and record the pulse and temperature of the patient at each visit, as required by Rule E. 14, and falsely recording temperature and pulse of the patient for dates on which the pulse and temperature had not been taken (misconduct). A patient suffering from illness supposed to be infectious the midwife did not send to the Local Supervising Authority the notification that she was herself liable to be a source of infection, as required by Rule E. 22 (1) (e); the patient suffering as last aforesaid the midwife did not undergo disinfection to the satisfaction of the Local Supervising Authority before going to another maternity patient, as required by Rule E. 6, and she neglected to wash the patient's external parts with soap and water and to swab them with an efficient antiseptic solution before making the first internal examination, as required by Rule E. 8 (a). A midwife being sentenced to imprisonment for six months in the second division for that being a person over 16 years of age having the custody, charge, or care of a child under the age of two years, she wilfully abandoned or exposed the said child in a manner likely to cause it unnecessary suffering or injury to its health (misconduct). Being in attendance at a confinement the midwife administered twilight sleep to the patient otherwise than under the direction of a registered medical practitioner (misconduct); she falsely informed the patient and her relatives that such treatment had been administered by a registered medical practitioner (misconduct), and the patient suffering from serious rupture of the perineum, the midwife did not explain that the case was one in which the attendance of a registered medical practitioner was required, as provided by Rule E. 21 (3). Being in attendance at a confinement the midwife employed an uncertified person as her substitute, contrary to the Midwives Act, 1902, Section 1 (4), and she neglected to secure the comfort and cleanliness of the patient, as required by Rule E. 12. Having advised medical aid for a patient and there being threatened danger, the midwife did not await the arrival of the registered medical practitioner, as required by Rule E. 7. A midwife paid only four visits to the patient during the lying-in period, thereby failing to satisfy her responsibility to the patient under Rule E. 12.

At a meeting held on the following day, a letter was considered from the Medical Secretary of the Committee on the causes and prevention of blindness, requesting the Board to nominate a representative or representatives to give evidence before the Committee as to the training of midwives in respect of the prevention of ophthalmia neonatorum. The Board nominated Dr. J. S. Fairbairn and the Secretary as representatives to give evidence as to the training of midwives in respect of the prevention of ophthalmia neonatorum before the Committee on the causes and prevention of blindness. The Board recommended that Dr. M. A. Pilliet, one of the inspectors of midwives for the County of London, be invited to give evidence.

SCOTTISH BOARD OF HEALTH.—The Consultative Council on Medical and Allied Services, appointed by the Scottish Board of Health, have presented to the Board an Interim Report on a reference made to them by the Board on the subject of a scheme of medical service for Scotland. The Report is being printed as a Parliamentary paper, and will be published by H.M. Stationery Office in the course of a few days.

HOSPITAL FOR NERVE CASES NEAR BRISTOL.—Ashton Court, near Bristol, which was used as a hospital for officers during the war, has been leased for five years to the Ministry of Pensions, and has been opened as a hospital for nerve cases. It contains 120 beds, which will all be required for cases in the Bristol area. Ashton Court is surrounded by gardens and a park, which will doubtless be appreciated by the patients. The institution will also provide suitable training in handicrafts; the stables are to be fitted up as workshops.

LITERARY INTELLIGENCE.—Mr. Murray, of Albemarle-street, London, W., announces a new edition of Mr. Frederick Soddy's volume on "The Interpretation of Radium."—Mr. Henry Kimpton announces the forthcoming publication of the following new books and new editions: "Exophthalmic Goitre and its Non-Surgical Treatment," by Dr. Israel Bram; "Operative Gynæcology," by Dr. H. S. Crossen; "Practical Treatise on Artificial Crown, Bridge, and Porcelain Work," by Professor George Evans; "Practical Text-book of Midwifery for Nurses," by Dr. Robert Jardine; "Fundamentals of Human Anatomy, including its Borderland Districts, from the Viewpoint of a Practitioner," by Dr. Marsh Pitzman; "Infant Education," by Dr. Eric Pritchard.

THE ABERYSTWYTH GUARDIANS AND AN EX-SERVICE APPLICANT.—At their meeting on Nov. 22nd the Aberystwyth board of guardians considered the reply received from Dr. Addison, Minister of Health, on their observations respecting the appointment of a successor to the late Dr. Bonsall. Of the two applicants for the post one was Dr. A. Thomas, who served throughout the war, but he was not appointed. Ex-soldiers and townspeople took up the matter and held protest meetings, and as the matter was decided solely by the country guardians voting against Dr. Thomas, the matter was reported to Dr. Addison. In his reply to the board Dr. Addison advised the guardians to reconsider their decision, pointing out that the country expected public bodies to appoint ex-Service men to vacant posts when suitable applicants were available. The guardians considered the letter, and there were warm passages between country and town members, but in the end the guardians, by 22 votes to 8, decided to adhere to their decision, and resented any interference from the authorities.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—At the last meeting of this society, held in Liverpool, with Dr. J. E. Gemmell, the senior Vice-President, in the chair, Dr. F. Hamilton Lacey read a paper on the After-Results of Colporrhaphy Performed in 470 Cases of Genital Prolapse. This figure represented the number traced out of 690 operations performed at St. Mary's Hospitals, Manchester, during the years 1914, 1915, and 1916, and thus three or more years had elapsed since the operation. Each patient was sent a printed list of questions, and a personal interview was arranged if possible. The cases grouped themselves into four classes—cystocele, rectocele, prolapsus uteri, and inversion of the vagina around the elongated cervix. Operations for the repair of the perineum only were excluded. The operations performed were anterior colporrhaphy, posterior colporrhaphy combined with perineorrhaphy, and in some cases amputation of the cervix in addition. Of the 470 patients who replied to the questions, 391, or 83 per cent., stated that they were cured of their prolapse. Of the remaining 79 cases, 29 came for examination, and 17 of these had some prolapse, slight in most cases. Only one case of procidentia was met with, in a woman aged 76. The amputation of the cervix did not seem to affect results. Colporrhaphies stood the strain of subsequent pregnancies well, but the failures naturally had a higher percentage of subsequent pregnancies than the successes. Professor Henry Briggs said he had been disappointed with his results from colporrhaphy, and did not like leaving the uterus in a retroverted position. He doubted if cases of prolapse could be cured by creating a mass of scar tissue in place of the normal support of the pelvic floor. Dr. A. Donald said that colpo-perineorrhaphy was the best operation for prolapse. He had had cases with four or five subsequent labours where the result had remained good. He considered it quite unjustifiable to remove the uterus in the treatment of prolapse. He, personally, did not think the position in which the uterus was left mattered at all; narrowing the vagina was the important point. Dr. A. Stookes had performed colporrhaphy for the last six years, and was well satisfied with his results. He entirely disagreed with the statement that complete prolapse cannot be cured by perineal operations. Dr. Gemmell thought that a fixation operation was sometimes required. He had met with cases where a ventrifixation combined with colporrhaphy had given better results than the latter operation alone.

THE LATE SIR E. VENNING.—Sir Edgcombe Venning, F.R.C.S. Eng., L.R.C.P. Lond., died recently at his residence, in Falmouth, in his 84th year. The deceased was the son of the late Mr. Meybohm Venning, and received his medical education at St. George's Hospital, London. He qualified M.R.C.S. in 1858 and L.R.C.P. in 1862. Five years later he took the F.R.C.S. Eng. After serving as house surgeon and surgical registrar at St. George's Hospital he joined the Army Medical Department, and was for 15 years surgeon to the 1st Life Guards. In 1873 he married Miss F. E. Pearson, daughter of Captain Aylmer Pearson, who died about three years ago. Sir Edgcombe Venning was a vice-president of the Royal Medico-Chirurgical Society and the Medical Society of London. Among his distinguished patients at one time was Mr. Balfour, at the close of whose Ministry in 1905 Edgcombe Venning received his knighthood. He took up his residence several years ago at Falmouth, where he was highly respected; he took great interest in the local hospital and was a member of the committee.

THE BRITISH DENTISTS' HOSPITAL.—The eighth annual report of this institution, which has just been issued, shows that its scope is being continuously enlarged. The hospital now has working agreements with the St. Pancras, Wandsworth, and Lewisham Councils respectively, enabling the mothers and infants attending the Welfare Centres there to obtain adequate dental treatment, and the provision of artificial teeth whenever necessary, at the hospital's treatment centres in Camden Town, Clapham Common, and Lewisham. The Battersea, Greenwich, Hampstead, and Holborn Borough Councils have also arranged with the British Dentists' Hospital for the institution of dental clinics for the same class of patients at the Councils' own centres, the necessary equipment and the services of dentists being provided by the hospital executive. At Greenwich, Hampstead, Holborn, Paddington, and Wandsworth, under agreements with the hospital, the patients attending the local tuberculosis dispensaries are enabled to obtain advice and the necessary dental treatment on the recommendation of the medical officer of health. Negotiations are proceeding for similar provision by the hospital in other metropolitan boroughs. At Lewisham new arrangements with the London County Council will enable 2200 school children per annum to be given dental treatment. The report includes statistics of the number of attendances and the work done at the various treatment centres and clinics, and a balance-sheet which shows a deficit of £140 for the year 1919. The offices of the British Dentists' Hospital are at 31, Camden-road, London, N.W. 1.

CHARTERED SOCIETY OF MASSAGE AND MEDICAL GYMNASTICS: OPENING OF GLASGOW CLUB.—The Incorporated Society of Trained Masseuses (I.S.T.M.) and the Institute of Massage and Remedial Gymnastics of Manchester have joined and have been granted a Royal Charter under the above designation; the society will be briefly known as the C.S.M.M.G. In April, 1919, the local members of the I.S.T.M. formed a club and took a room at 13, Newton-place. Since that date the collection of a library has been begun, and lectures have been given by the members of the medical profession every month. At a meeting on Oct. 30th, 1920, a new and larger room was formally opened. Mrs. Edmund Toms, one of the early members of the I.S.T.M., presided, and addresses were delivered by Mr. J. Hogarth Pringle, Dr. James Russell, Dr. John Graham (professor of Anatomy, Anderson's College), and Miss Gordon (Inspector of Massage under the Ministry of Pensions (Scotland)). Mr. Pringle congratulated the members on forming a club, and advised them to get in touch and keep in touch with the medical profession. They would find that conservative opinion might delay their activities, but only for a time; they must not act except under medical control. Dr. Russell spoke of the experiences of the war, and emphasised that war wounded were not alone the objects of benefit from massage and medical gymnastics. Others were the cases crippled by infantile paralysis as well as by rickets, and those who had sustained injuries. Professor Graham expressed his approval of the teaching in anatomy to the students of massage who had attended his demonstrations, and of the high standard exacted. Miss Gordon entertained the meeting with her account of massage, or the want of it, in the early years of the war, showing how this had been overcome mainly by the activities of the society. A presentation to Mrs. H. Rutherfurd, the honorary secretary of the club, was made at the end of the meeting in appreciation of her exertions since its inception.

UNIVERSITY OF BRISTOL.—**At the annual meeting** of the Court of the University, held on Nov. 19th, it was unanimously resolved that the title of emeritus professor be conferred on Dr. Lloyd Morgan, late professor of psychology and ethics, and on Mr. James Swain, late professor of surgery. The chairman, Mr. G. A. Wills, stated that their services to the University had been invaluable.

SANITARY CONDITION OF DARTMOUTH.—**As recently** stated in THE LANCET, the Ministry of Health urged on the Dartmouth Town Council the necessity of appointing a whole-time officer as inspector of nuisances and as officer under existing Housing Regulations. The town council did not adopt the suggestion, and the Ministry last week sent another communication to the council, stating that the sanitary condition of the town in 1914 was far from good, and that in several instances the recommendations made in that year had not been acted upon. The communication also stated that none of the houses in the borough had been inspected since 1917, that the part-time appointment made by the town council was unsatisfactory, and that the Health Ministry was not prepared to sanction it with a view to repayment.

Parliamentary Intelligence.

HOUSE OF COMMONS.

TUESDAY, NOV. 16TH.

Poor-law Hospitals and Infirmaries.

Mr. ORMSBY-GORE asked the Minister of Health whether he had consulted the Association of Poor-law Unions regarding the proposed transfer of their hospitals to the county councils, under Clause 11 of the Ministry of Health (Miscellaneous Provisions) Bill; how many beds were provided in Poor-law hospitals and infirmaries, in workhouses, and in separate institutions; how many of these beds were vacant on March 1st and Sept. 1st, 1920, respectively; and whether accommodation would be reserved for the boards of guardians' needs in any hospitals or infirmaries to be transferred to the control or administration of the county councils.—Dr. ADDISON replied: The answer to the first part of the question is in the negative. The number of beds in Poor-law institutions of various kinds on Jan. 1st, 1920, according to the returns supplied by the clerks to the guardians are: separate infirmaries, 35,264; separate institutions for defectives and other special classes, 3368; separate institutions for children, 34,673; other Poor-law institutions, 204,995. Included in these figures are 1644 beds in children's institutions, and 54,090 in "other Poor-law institutions" set apart for the sick. In a certain number of cases beds were, on the date of the return, still in the hands of the military authorities and have generally be excluded by the clerks in their statements. The total number of unoccupied beds was approximately, on March 1st, 107,000, and on Sept. 1st, 112,000. With regard to the last part of the question, a transfer would clearly not be approved if, as a result, persons who at present can obtain hospital treatment would suffer.

Indian Medical Officers in Persia.

Lieutenant-Colonel SPENDER-CLAY asked the Secretary for War whether his attention had been called to the fact that officers of the Indian Medical Service now stationed in Persia had been in that country for over five years without leave; and whether steps would be taken to replace these officers without further delay.—Mr. CHURCHILL replied: I am not quite clear from the honourable and gallant Member's queston whether he refers to leave to the United Kingdom or to India. It is possible that a certain number of officers of the Indian Medical Service in Mesopotamia and Persia bave not had leave to the United Kingdom during the period mentioned. Everything possible is still being done to relieve officers who have served for lengthened periods without leave, but, owing to the shortage of officers of the Indian Medical Service, and to the greatly increased number of officers of that service required for duty in garrisons other than India, it is regretted that no promise can be given to relieve any particular officer. The granting of leave to India is a matter for the authorities under whom the officer may be serving, and I am sure that they are doing all that is possible in the matter, having regard to the prevailing conditions.

WEDNESDAY, NOV. 17TH.

Medical Officers and s.s. "Patricia."

Captain HOTCHKIN asked the Parliamentary Secretary to the Shipping Controller, with reference to the last voyage of the s.s. *Patricia* from Bombay to Liverpool, whether he was aware that medical officers stated that there was insufficient air-space in the cabins, that many of the first-class passengers were put in third-class accommodation on "E" deck, that many passengers were unable to obtain fresh water to wash in, that there was no fresh water to wash clothes in, that very little notice appeared to have been taken of a report submitted on the defects in sanitation, with some suggestions for improvement, that the ship continued in a most insanitary condition, especially on the troop decks, and that no ice was obtainable throughout the Red Sea, there being only a little on board for very serious cases, so that the ordinary sick could have none.—Colonel WILSON replied: An exhaustive inquiry has been held in regard to the question of the homeward voyage of the *Patricia*. It is not correct that there was insufficient air-space in the cabins. The accommodation in "E" deck is not third-class accommodation, but second-class; it is true that many of the first-class passengers were berthed on "E" deck, owing to the fact that the Government authorities at Bombay decided that no women of any class should be berthed in "E" deck, and consequently a number of officers had to be berthed there. It is true that no ice was obtainable through the Red Sea, except for hospital purposes. The supply taken at Bombay was considered ample to supply all needs as far as Egypt, but owing to the length of the voyage and the fact that the refrigerator was out of order, the supply put on board at Bombay was not sufficient, and consequently the five tons remaining when the ship arrived at Aden had to be reserved entirely for medical purposes.

THURSDAY, NOV. 18TH.

A Case of Tuberculous Meningitis.

Lieutenant-Commander HILTON YOUNG asked the Minister of Pensions whether his attention had been called to the case of Mrs. Olive Henry, widow of the late Private James William Henry, No. 21,103, Royal Army Veterinary Corps, of 50, Millers-lane, Norwich, who enlisted in September, 1916, and was discharged in February, 1919, as medically unfit with optic atrophy; whether on April 3rd, 1919, the Ministry of Pensions notified the local committee that this disability was attributable to his service and had been assessed and paid at 100 per cent.; whether Private Henry died on May 20th, 1920, of general paralysis, and the local committee assessed his widow's pension at the appropriate rate in view of his death having been attributable to his disability; whether that rate had now been reduced; and, if so, on what grounds, in view of the decisions of the Ministry and of the committee referred to.—Mr. IAN MACPHERSON replied: After full consideration of this case the medical advisers of the Ministry found that the disease, tuberculous meningitis, which caused this soldier's death, commenced after discharge and was not connected with the optic atrophy for which he was pensioned. The widow was accordingly granted pension at the rate of 13*s.* 9*d.* a week under Article 17 of the Royal Warrant, and was informed, on Oct. 9th last, of her right to appeal to the Pensions Appeal Tribunal against the refusal of pension under Article 11 of the Warrant. No appeal has yet been received.

New Committee on Local Pensions Administration.

Mr. MYERS asked the Minister of Pensions if he could state if the proposed committee to inquire into the local administration and the machinery of the Ministry had been set up; and, if so, could he state the personnel of the committee, the terms of reference, and when the committee proposed to start their deliberations.—Mr. IAN MACPHERSON replied: The answer to the first part of the question is in the affirmative. The personnel of the committee is as follows: Major G. C. Tryon, M.P. (Parliamentary Secretary to the Ministry of Pensions), chairman; Miss E. Kelly, C.B.E., J.P., member of Portsmouth Local War Pensions Committee; Captain H. H. C. Baird, D.S.O., editor of the *Service Man*; Major R. Baker, M.P.; Mr. G. W. Chrystal, C.B., Permanent Secretary, Ministry of Pensions; Mr. A. T. Davies, C.B.E., M.P.; Lieutenant-Colonel J. P. Nisbet Hamilton Grant, J.P., chairman of Perth County Local War Pensions Committee; Major C. G. C. Hamilton, M.P.; Sir Henry P. Harris, K.B.E., M.P.; Major V. L. Henderson, M.C., M.P.; Mr. E. H. Hodgson, Assistant Secretary and Director of Establishments, Ministry of Pensions; Mr. C. F. Adair Hore, C.B., Senior Assistant Secretary, Ministry of Pensions; Mr. Walter Peel, C.B.E., Representative of the Association of Local War Pensions Committee; Sir Samuel B. Provis, K.B.E., C.H., late Permanent Secretary, Local Government Board; Mr. R. E. Westaway, Regional Director for Ulster; and Mr. Robert Young, M.P. The terms of reference are: "To inquire into the system and methods of administration of the Ministry of Pensions, with special reference to the working of the regional and local committee system, and the existing arrangements for the issue of pensions." It is hoped to call the committee together during the course of next week.

Position of the Voluntary Hospitals.

Lieutenant-Colonel Sir FREDERICK HALL asked the Minister of Health if his attention had been called to the report that the London Hospital might have to close some of its wards

owing to lack of funds; if in the absence of hospital service, supported mainly by voluntary contributions, the charge on the National Exchequer for medical and surgical attendance, under the National Health Insurance Act, would be greatly increased; and if the Government had under consideration any proposal to give financial support to the London and other voluntary hospitals.—Dr. ADDISON replied: I am aware of the statement referred to, and I hope that the National Relief Fund will have regard to the special difficulties of the London Hospital in distributing their grant of £700,000 towards defraying the war deficits of the voluntary hospitals of the United Kingdom. I am most anxious to preserve the voluntary system, and the proposals of the Government as contained in Clause 11 of the Ministry of Health (Miscellaneous Provisions) Bill are put forward with a view of assisting the present urgent necessity.

London Epidemics.

Mr. LEONARD LYLE asked the Minister of Health whether he could make any statement on the epidemics of diphtheria, scarlet fever, and influenza in London, giving the statistics for the last three months; whether he could furnish any explanation of the seriousness of the two first-named epidemics; and what steps he and his advisers were taking to cope with them.—Dr. ADDISON replied: Scarlet fever and diphtheria have been exceptionally prevalent in London this autumn, but both diseases are of an exceedingly mild type, and the death-rate in each case is far below that experienced in previous epidemics. I will send my honourable friend a statement showing the number of notifications and deaths from these diseases in London during the past three months and also the number of deaths from influenza registered during the same period. There is no evidence of the existence of epidemic influenza in this country at the present time. The origin of these waves of zymotic disease is obscure. Similar, although more fatal, outbreaks occurred in 1892 and 1893. I am glad to say that existing machinery and the available hospital accommodation have proved equal to the task of coping with the present outbreaks.

Defective Children in Brentford Union Hospital.

Sir HERBERT NIELD asked the President of the Board of Education whether he had received any communication with reference to the proposal of the Brentford board of guardians to engage the services of a nurse-teacher, who should impart some approved form of elementary instruction to the large number of children who were inmates of the board's hospital at Isleworth, often for periods of considerable length, suffering from various forms of tuberculous affections of the limbs and from other maladies, who were wholly without elementary education, and not a few of whom were unable to read or write; and whether he could see his way to make a grant to the guardians for the purpose of this appointment being made, seeing that the Ministry of Health were unable to certify the institution, so as to enable them to make the necessary provision.—Mr. H. LEWIS (Parliamentary Secretary to the Board of Education) replied: A communication with regard to this proposal was received by the Board in June last and referred to the Ministry of Health. The Board have no power to make grants to an institution for defective children which is not certified by them under the Elementary Education (Defective and Epileptic Children) Acts, 1899 to 1914.

FRIDAY, NOV. 19TH.

Nurse-Teacher for Isleworth Hospital.

Sir HERBERT NIELD asked the Minister of Health whether he was aware that at the Isleworth Hospital, under the control of the Brentford Guardians, there were always a number of children suffering from various complaints in the nature of tuberculous affections of the limbs and other maladies, the treatment of which was almost invariably considerably prolonged, whereby the children were debarred from receiving elementary instruction for a long period and when they could best acquire it; and whether, in order to meet these circumstances, the Ministry would take steps, either alone or in conjunction with the Education Department, or will endeavour to induce the latter Department to make a grant for the appointment of a nurse-teacher who could impart elementary instruction to the children, and so aid their education whilst they were retained in the hospital.—Dr. ADDISON replied: Yes, Sir; and I have informed the guardians that in my opinion it is desirable that such an appointment should be made. There are, however, no funds out of which a grant could be made by the Ministry of Health, nor am I able to certify that any sum is due in respect of the arrangement proposed from the Exchequer contribution account of the County Council.

District Officers of Health.

General SIR IVOR PHILIPPS asked the Minister of Health whether a county medical officer of health had any rights of supervision over or responsibilty for the work of district officers of health; and, if not, whether he proposed to introduce legislation to make any change in this respect.—Dr. ADDISON replied: The answer to the first part of the question is in the negative. The last part is being considered in connexion with the future health services of the country.

MONDAY, NOV. 22ND.

Medical Referee and Ealing War Pensions Committee.

Sir HERBERT NIELD asked the Minister of Pensions whether the Regional Director of the Ministry of Pensions, London Region, at Burton Court, S.W., received on or about Nov. 12th a registered letter from the Ealing Local War Pensions Committee referring to statements made to the officers of that committee by the medical referee for Ealing to the following effect: That the Ministry had shown him, the medical referee, the whole of the correspondence between the Ministry and the committee; that the Ministry had informed him that they were not in a position to compel the committee to send a greater number of cases to him; that the Ministry could make things very uncomfortable for the committee; that the Ministry would make the committee suffer for his, the referee's, treatment in another way; that he, the referee, need not worry about his ultimate appointment as chief medical referee for Ealing; that he must be patient, as the Ministry had made up their minds to wipe out the Ealing committee; whether, if such a letter had been received, why no answer had been sent to it; whether, as the allegations had not been denied, the Ministry were prepared to stand by them; in that case, whether such a challenge by permanent officials towards a local committee against whom no charge could be brought had his sanction; and, if not, what action he proposed to take to make his chief and subordinate officials responsible, after due inquiry, in order to protect local committees engaged upon the voluntary administration of war pensions throughout the country against such bureaucratic intolerance and insult.—Major TRYON (Parliamentary Secretary to the Ministry of Pensions) replied: A letter, dated Nov. 11th, was received at the headquarters of the London Region, addressed to the Regional Director by the secretary of the Ealing Local War Pensions Committee, and containing statements in the terms mentioned in the question alleged to have been made by a medical referee to the secretary of the committee. The medical referee was interviewed by an officer of the Region, and denied having made the statements attributed to him. A letter to that effect was sent by the Regional Director to the chairman of the committee on Nov. 20th.

International Anthrax Agreement.

Major HILLS asked the Secretary for the Home Department whether, as a result of the resolutions as to anthrax passed at the Washington Conference, steps were being taken to arrive at an international agreement on disinfection at ports of embarkation.—Mr. SHORTT replied: The question is included in the agenda of the International Labour Conference of 1921, with a view to the adoption of a draft convention.

Compensation for Phthisis in Grinding Industry.

Mr. WILLIAM THORNE asked the Secretary for the Home Department whether a scheme had been framed for compensation for phthisis in the grinding industry under the Workmen's Compensation (Silicosis) Act; and if he was aware that the prevalence of this disease in the industry was the subject for the serious consideration of both employers and workmen.—Mr. SHORTT replied: A scheme of compensation has not yet been framed for this industry as inquiry had first to be made into the conditions in the different sections of the industry. The inquiry has been a long and difficult one, but is now nearing completion, and I hope that it will be possible shortly to proceed to the establishment of a scheme and of improved and more comprehensive measures of prevention. The question is certainly one deserving the serious consideration of the employers and workers concerned.

TUESDAY, NOV. 23RD.

Lord Haldane and the London University Site.

Sir WILLIAM DAVISON asked the President of the Board of Education whether he agreed, on behalf of the Government, to purchase from the Duke of Bedford the site at the rear of the British Museum for the University of London for the sum of £425,000 without making any inquiries as to previous negotiations in 1911 and 1912 between Lord Haldane, a Member of His Majesty's Government, Chairman of the Royal Commission on University Education in London, and Sir Francis Trippel, who had obtained an option for the purchase of a portion of the site now agreed to be purchased by the Government; whether he was aware of a letter dated Dec. 15th, 1911, from Lord Haldane to Sir Francis Trippel, subsequently published in the press, in which Lord Haldane stated that he had laid the proposal before the Prime Minister, who entirely approved of the same; and whether he could inform the House as to the area of the land which was then proposed to be purchased, the price asked for the same, stating the price per acre as compared with the price per acre of the land now agreed to be purchased, so that the

House might have these material facts before it when considering the agreement which had now been entered into with the Duke of Bedford by the Government.—Mr. HERBERT LEWIS replied: The answer to the first part of the question is in the affirmative; the answer to the last two parts is in the negative. Any tentative negotiations which Lord Haldane may have entered into at the somewhat remote dates mentioned did not result in any engagement or agreement which in any way bound either the Government, of which he was a Member, or their successors in office. The action of the present Government in making their offer to the University in April last was decided upon solely as the result of their own independent consideration of the needs of the University as they found them at that time, and, as the honourable Member has already been informed, was not in any way determined by anything which took place in 1911 and 1912.

Child Adoption.

Viscountess ASTOR asked the Secretary for the Home Department if he would state how far progress had been made in drafting proposals dealing with child adoption; and when he proposed to introduce legislation to give effect to them.—Mr. SHORTT replied: I understand that the committee which I appointed in August to consider this question are now drafting their report and hope to present it before very long. I cannot make any statement as to legislation at present.

Medical Boards in Belfast.

Mr. DEVLIN asked the Minister of Pensions whether it was proposed to transfer the medical boards in connexion with the Ulster Region of the Ministry of Pensions from the Grand Central Hotel, Belfast, their present headquarters, in the centre of the city, to Hilden Convalescent Hospital, which was on the outskirts of the city; whether it would be most inconvenient for the disabled men to have to travel so far to be examined, as the long journey would cause unnecessary suffering, and the expense in tramway fares would be very great; and whether, as there had been no complaint regarding the present arrangements, he would take steps to cancel the proposed transfer.—Major TRYON replied: The Commissioners of Public Works are responsible for the provision of accommodation for this Ministry in Ireland, and I understand that in the interests of national economy the Grand Central Hotel, which at present accommodates both the Ulster Regional Headquarters and the Ulster Medical Area Boards, must be vacated as soon as possible. As the Medical Boards are not likely to continue indefinitely at their present strength, the heavy capital expenditure necessary for the purchase of a building or site in the centre of the city cannot be justified, and as I am informed that suitable premises cannot be obtained on a short lease, the provision of temporary hutting upon a vacant site offers the best solution. It was first proposed to place the huts on the old asylum's ground, which is centrally situated, but the Belfast Corporation declined to let the site, and in default of a more central site the Commissioners of Public Works have the Hilden Convalescent Hospital grounds under consideration as an alternative. I will inform my honourable friend as soon as a definite decision has been reached by the Commissioners. My honourable friend is doubtless aware that compensation for loss of time and travelling expenses may be claimed by the pensioners.

Unidentified Mental Cases.

Lieutenant-Commander KENWORTHY asked the Minister of Pensions whether a photographic gazette of all unidentified ex-Service men who were inmates of mental hospitals was being prepared; if so, when it would be ready and how it would be distributed.—Major ENTWISTLE asked the Minister of Pensions if it was a fact that a number of unidentified ex-Service men were at the present time inmates of lunatic asylums and mental hospitals; and, if so, would he at once arrange for the publication of a journal containing photographs of these men and issue it to the general public in the hope that some of these men might be identified by relatives and friends.—Major TRYON replied: I am glad to have this opportunity of correcting the unfortunate impression which seems to be prevalent that there are many unidentified ex-Service men in mental institutions. The fact is that of all the male patients admitted since August 1st, 1914, to county and borough asylums in England and Wales only four are at present unidentified; and of these two are over 60, one over 50, and the other is about 16 years of age. My right honourable friend, the Secretary for War, in a reply on Nov. 17th, stated that there was no unidentified soldier in the mental hospitals under the control of the War Office, and so far as my Department is aware, there is no unidentified ex-Service man in any other mental institution.—Dr. MURRAY: Does that apply to Scotland, or only to England and Wales?—Major TRYON: I have not had the whole of the returns from Scotland, but I have the hope that no such cases will be found in Scotland.

BOOKS, ETC., RECEIVED.

ARNOLD, EDWARD, London
Lectures on Diseases of Children. By Robert Hutchison, M.D. 4th ed. Pp. 416. 21*s*.

BRITISH MUSEUM, BERNARD QUARITCH, and OXFORD UNIVERSITY PRESS, London.
Grains and Grammes: A Table of Equivalents for the Use of Numismatists. Pp. 35. 3*s*.

CLOYD J. HEAD AND CO., Chicago.
Maternitas. A Book Concerning the Care of the Prospective Mother and Her Child. By Professor C. E. Paddock, M.D. Pp. 216. $1.75.

HEADLEY BROTHERS, London.
Symbiosis. A Socio-Physiological Study of Evolution. By H. Reinheimer. Pp. 295. 15*s*.

HODGES, FIGGIS, AND CO., Dublin. MULLAN AND SON, Belfast. SIMPKIN, MARSHALL, London.
Autobiography of Sir C. A. Cameron. With Introduction by Sir James H. M. Campbell, Bart., P.C. Pp. 162. 7*s*. 6*d*.

HOEBER, PAUL B., New York.
The School of Salernum, English Version. By Sir John Harington, F. R. Packard, M.D., and F. H. Garrison, M.D. Pp. 216. $3.75.
Diabetes: a Handbook for Physicians and Their Patients. By P. Horowitz, M.D. $2.00.

KARGER, S., Berlin.
Uber die Symptomatologie und Therapie der Magen- und Duodenalgeschwüre. Von Dr. E. Rosenthal. Pp. 72 and plates. M.12.
Studien über Darmträgheit. Von Dr. F. X. Mayr. Pp. 266. M.24.
Die Wurmfortsatzentzündung. Von Dr. A. Rheindorf. Pp. 244. M.18.
Uber Disposition. Von Dr. F. v. Szontagh. Pp. 347. M.18.
Die Abderhaldensche Reaktion. Von Dr. G. Ewald. Pp. 210. M.24.
Kursus der Psychotherapie und des Hypnotismus. Von San. Rat. Dr. G. Flatau. Pp. 176. M.16.
Die Schlafstörungen und ihre Behandlung. Von Dr. L. E. Bergman. Pp. 136. M.12.
Die Behandlung schwächlicher Kinder in öffentlicher Fürsorge. Von Dr. J. Ritter. Pp. 40. M.4.
Innere Secretion und Dementia Præcox. Von O. Lessing. Pp. 64. M.4.
Gynäkologisches Vademekum. Von Dr. A. Duhrssen. Pp. 290. M.12.
Geburtshilfliches Vademekum. Von Prof. A. Duhrssen. Pp. 332. M.19.
Kompendium der Augenheilkunde. Von Prof. Dr. P. Silex. Pp. 304. M.20.
Therapeutisches Vademekum für die Kinderpraxis. Von Dr. H. Kleinschmidt. Pp. 196. M.15.
Diagnostische Winke für die tägliche Praxis. Von San. Rat. Dr. E. Grätzer. Pp. 264. M.16.

KIMPTON, HENRY, London.
Exophthalmic Goitre and its Non-surgical Treatment. By I. Bram, M.D. Pp. 438. 32*s*.
Practical Text-book of Midwifery for Nurses. By R. Jardine, M.D. 7th ed. Pp. 296. 7*s*. 6*d*.
The Fundamentals of Human Anatomy, including its Borderland Districts. By M. Pitzman, M.D. Pp. 356. 24*s*.
Operative Gynæcology. By H. S. Crossen, M.D. 2nd ed. Pp. 717. 63*s*.

LIPPINCOTT, J. B., Co., Philadelphia and London.
The Nature of Animal Light. By E. N. Harvey, Ph.D. Pp. 183. 10*s*. 6*d*.

MASSON ET CIE, Paris.
Les Antigènes et les Anticorps. Caractères Généraux. Applications Diagnostiques et Thérapeutiques. Par M. Nicolle, de l'Institut Pasteur de Paris. Pp. 115. Fr.4.50.
Manuel d'Urétroscopie. Par Robert Henry et André Demonchy. Préface du Dr. Marion. Pp. 116. Fr.25.
Le Diabète Sucré. Etudes Cliniques Physiologiques Thérapeutiques. Par le Dr. Marcel Labbé, Professeur de Pathologie Générale à la Faculté de Paris. Pp. 376. Fr.20.

OXFORD UNIVERSITY PRESS, London.
The Logic of the Unconscious Mind. By M. K. Bradby. Pp. 316. 16*s*.

RIVERTON PRESS, Chicago.
Impotence and Sterility, with Aberrations of the Sexual Function and Sex Gland Implantation. By G. F. Lydston, M.D. Pp. 334.

STEINKOPFF, T., Leipzig and Dresden.
Die Physikalische Chemie in der inneren Medizin. Von Prof. Dr. H. Schade. Pp. 370. £1 1*s*.

UNIVERSITY OF LONDON PRESS, London.
Regulations and Courses for Internal Students for the Session 1920–21.
Regulations for External Students, September, 1920.

WILEY, JOHN, AND SONS, New York. CHAPMAN AND HALL, London.
Scientific and Applied Pharmacognosy. By H. Kraemer, Ph.M. 2nd ed. Pp. 471. 38*s*.

WILLIAMS AND NORGATE, London.
Some Conclusions on Cancer. By C. Creighton, M.D. Pp. 365. 42*s*.

WILSON, EFFINGHAM, and STEVENS AND SONS, London.
Income Tax Acts as they Affect the Public. By G. F. Emery, LL.M. Pp. 268. 21*s*.

WITHERBY, H. F. AND G., London.
Initiative in Evolution. By W. Kidd, M.D., F.R.S.E. Pp. 262. 15*s*.

Appointments.

Successful applicants for vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ANNAND, W. F., M.D. Lond., has been appointed Physician to the Coventry and Warwickshire Hospital.

BLACKLEY, J. F., B.A., M.D., B.Ch., B.A.O. Dub., Regional Medical Officer on the staff of the Ministry of Health for Cumberland, Westmorland, and North Lancashire.

BOWKER, R. R. S., M.B., Ch.B., House Physician, Western Infirmary, Glasgow.

DATE, W. H., M.D. Durh., M.R.C.S., L.S.A., D.P.H. Irel., Assistant Medical Officer of Health for the County of Devon.

EVANS, E. P., M.D. Lond., Regional Medical Officer for West Wales.

HODGSON, J. W., M.D., Assistant Medical Officer in charge of the Electrical Department of the Royal Devon and Exeter Hospital.

MCDONALD, N., O.B.E., M.B., Ch.B. Vict., M.R.C.S., L.R.C.P. Lond., Honorary Anæsthetist, Queen Mary's Hospital for the East End, Stratford.

ORR, J., M.B., C.M. Edin., Certifying Surgeon under the Factory and Workshop Acts for the St. Andrew's District of the county of Fife.

WOTHERSPOON, Mrs. R. L., L.R.C.P. & S. Edin., L.R.F.P.S. Glasg., Assistant School Medical Officer to the Hastings Education Authority.

St. John's Hospital for Diseases of the Skin: SIBLEY, W. K., M.D. Cantab., M.R.C.P., Physician-in-Charge of the Electrical Department; WHITE, EVA, M.R.C.S., L.R.C.P. Lond., Electro-therapeutist; KAPOOR, S. R., L.R.C.P. & S. Edin., Medical Registrar.

St. Thomas's Hospital: MACLEAN, H., M.D. Aberd., D.Sc. Lond., M.Sc. Liverp., Director of Clinical Medical Unit. *Staff:* GARNETT, D. G., M.R.C.S., L.R.C.P. Lond., MAXWELL, L. B., M.R.C.S., L.R.C.P. Lond., LOW, W. A., M.R.C.S., L.R.C.P. Lond., COHEN, C. B., M.R.C.S., L.R.C.P. Lond., MCARTHUR, A. G. F., M.R.C.S., L.R.C.P. Lond., SQUIRES, F. V., M.R.C.S., L.R.C.P. Lond., WALKER, A. R., M.R.C.S., L.R.C.P. Lond., ANTHONY, W. M., M.R.C.S., L.R.C.P. Lond., Casualty Officers and Resident Anæsthetists; BLAMPIED, H. J., M.R.C.S., L.R.C.P. Lond., ORME, E. S., M.R.C.S., L.R.C.P. Lond., HOBBS, F. B., M.R.C.S., L.R.C.P. Lond., CARDELL, J. D. M., M.R.C.S., L.R.C.P. Lond., Resident House Physicians; WARE, S. A. T., M.R.C.S., L.R.C.P. Lond., Resident House Physician for Children; CHURCHER, D. G., M.B., B.S. Lond., HALLIWELL, A. C., M.B., B.Ch. Cantab., NEILSON, D. F. A., M.R.C.S., L.R.C.P. Lond., SPENCE, D. B., M.R.C.S., L.R.C.P. Lond., Resident House Surgeons; FOLEY, W. B., M.B., B.S. Lond., Resident Orthopædic House Surgeon; MARRINER, H. I., M.R.C.S., L.R.C.P. Lond., Resident House Surgeon for Ear, Nose, and Throat; ROBINSON, R. H. O. B., M.B., B.Ch. Cantab., House Surgeon to Block 8; HALE, J., B.Ch. Cantab., Senior Obstetric House Physician; HUMPHREYS, R. M., M.B., B.Ch. Oxon., Junior Obstetric House Physician; ROBERTS, E. D. T., M.R.C.S., L.R.C.P. Lond., Senior Ophthalmic House Surgeon; MCLEAN, C. F., M.R.C.S., L.R.C.P. Lond., Junior Ophthalmic House Surgeon; CAVENAGH, J. B., M.B., B.Ch. Oxon., BYRNE, C. H. C., M.B., B.S. Lond., HOLMES, H. W. H., M.R.C.S., L.R.C.P. Lond., SHAW, J. A. P., M.R.C.S., L.R.C.P. Lond., KENDALL, G. M., M.B. Cantab., M.R.C.S., L.R.C.P. Lond., HAMILTON, C. K. J., M.R.C.S., L.R.C.P. Lond., HOEY, J. T. S., M.R.C.S., L.R.C.P. Lond., SPOOR, A. T., M.R.C.S., L.R.C.P. Lond., Clinical Assistants.

Vacancies.

For further information refer to the advertisement columns.

Abergavenny, Monmouthshire Asylum.—Jun. Asst. M.O. £400.
Bedford County Hospital.—H.S. and Asst. H.S. £180 and £150.
Birmingham General Hospital.—Res. Anæsth., H.P., and H.S. £100. Also two H.S.'s. £125.
Bradford Royal Eye and Ear Hospital.—Aural S.
Breconshire County Council.—Asst. M.O.H. £500.
Bristol Royal Infirmary.—Cas. H.S. £120.
Cambridge, Addenbrooke's Hospital.—H.S. and H.P. £130.
Cape Town University.—Chair of Bio-Chemistry. £900.
Cardiff, King Edward VII. Hospital.—H.S. £200.
Central London Throat, Nose, and Ear Hospital, Gray's Inn-road, W.C.—Two Res. H.S.'s. £75.
City of London Hospital for Diseases of the Chest, Victoria Park, E.—Asst. M.O £150.
Colonial Service.—M.O.'s for West African Medical Staff, Government Service in Malaya, East African Protectorates, West Indies (including British Guiana), Fiji, and the Western Pacific, &c.
Cumberland County Council.—Asst. County M.O. £500.
Darlington County Borough.—Female Asst. School M.O. £500.
Doncaster Royal Infirmary and Dispensary.—Asst. H.S. £225.
Down District Asylum, Downpatrick.—Asst. M.O.'s. £300.
East London Hospital for Children and Dispensary for Women, Shadwell, E.—Two Asst. P.'s.
Edinburgh University.—Lectureship on Orthopædic Surgery. £200.
Exeter, Royal Devon and Exeter Hospital.—Sen. H.S. £250.
Folkestone, Royal Victoria Hospital.—Res. M.O. £150.
Gateshead County Borough Mental Hospital, Stannington, Northumberland.—Asst. M.O. £350.
Gloucestershire Royal Infirmary and Eye Institution.—Asst. H.S. £150.
Hampstead General and North-West London Hospital, Haverstock Hill, N.W.—H.P., H.S., Cas. M.O., and Cas. S.O. £150.
Huddersfield Royal Infirmary.—Sen. H.S. £250.
Hull and Goole Port Sanitary Authority.—Asst. M.O.H. £750.
Hull Royal Infirmary.—Asst. H.S. £150. Hon. Asst. S. and Hon. Anæsth.
Leicestershire and Rutland Mental Hospital, Narborough, near Leicester.—Temp. M.O. 7 gns. per week.
Lenham Sanatorium.—Med. Supt. £650.
Lewes Victoria Hospital and Dispensary.—Res. M.O.
Liverpool, David Lewis Northern Hospital.—H.S. £120.
London County Mental Hospital Service.—Sixth and Seventh Asst. M.O.'s. £300.
London Lock Hospital, 91, Dean-street, W.—Hon. S.
Manchester, Ancoats Hospital, Mill-street.—H.S. £150.
Margate, Royal Sea Bathing Hospital for Tuberculosis.—Female S. £200.
Mount Vernon Hospital for Tuberculosis and Diseases of the Lungs and Heart, Northwood, Middlesex.—Asst. P.
Newark Hospital and Dispensary.—Res. H.S. £200.
Newcastle-upon-Tyne Hospital for Sick Children.—Jun. Res. M.O. £200.
Nottingham Children's Hospital.—Female Res. H.S. £200.
Nottingham City Asylum.—Second Asst. M.O. £400.
Nottingham General Hospital.—Res. Cas. O. £300. Also H.S. £200.
Plymouth Borough.—Asst. M.O.H. £500.
Pontypridd Urban District Council.—Female Asst. M.O. £550.
Portsmouth and Southern Counties Eye and Ear Hospital, Pembroke-road.—Oph. S.
Portsmouth Royal Hospital.—Sen. H.S. £200.
Queen Charlotte's Lying-in Hospital, Marylebone-road, N.W.—Pathologist and Registrar. £200.
Reading, Royal Berkshire Hospital.—Second H.S. £200.
Romford Isolation Hospital.—M.O.H. and Med. Supt. £800.
Royal Free Hospital, Gray's Inn-road, W.C.—Cas. O. £100. Also Res. Obst. Asst. £150. Also Three Chief Assts. 50 guineas. Also Med. Registrar. £250.
Royal Waterloo Hospital for Children and Women, Waterloo-road, S.E.—Cas. O. £100.
Ryde, Royal Isle of Wight County Hospital.—Res. H.S. £250.
St. Helens Hospital, Lancashire.—H.S. £250.
Salford Royal Hospital.—Cas. H.S. £150.
Shanghai Municipal Council.—Asst. M.O. 6000 Taels.
South Eastern Hospital for Children, Sydenham, S.E.—Res. M.O. £50.
Southport General Infirmary.—Jun. H.S. £175.
South Shields, Ingham Infirmary and South Shields and Westoe Dispensary.—Sen. and Jun. H.S. £225 and £175.
Swansea County Borough.—Asst. M.O. £500.
Wadsley, near Sheffield, West Riding County Asylum.—Third Asst. M.O. £400.
West London Hospital, Hammersmith-road, W.—H.S. £50.
West Norfolk and King's Lynn Hospital.—Res. M.O. £150.
Weston-super-Mare Hospital.—H.S. £180.
Windsor, King Edward VII. Hospital.—H.S. £200.
Worcestershire County Council.—Asst. County M.O. £500.

The Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Acts at Pontypool and at Hucknall.

Births, Marriages, and Deaths.

BIRTHS.

ALLAN.—On Nov. 14th, at Carlton-road, Putney, the wife of Peter Allan, M.D., D.P.H., of a son.

BARRY.—On Nov. 19th, at Saxley Meath Green, Horley, the wife of Capt. J. H. Barry, D.S.O., M.C., R.A.M.C., of a son.

DAVIS.—On Nov. 19th, at 46, Harley-street, W.1, to the wife of Edward D. D. Davis, F.R.C.S.—a daughter.

SAVORY.—On Nov. 15th, at "Bedwardine," Upper Norwood, S.E., the wife of Dr. C. H. Savory, of a daughter.

MARRIAGES.

ACHESON—RENNOLDSON.—On Nov. 17th, at St. Paul's Presbyterian Church, South Shields, Malcolm K. Acheson, M.C., M.D., to Dorothy J. Rennoldson, youngest daughter of the late Mr. and Mrs. Joseph M. Rennoldson, Fairfield, South Shields.

COWAN—DAVIS.—On Nov. 20th, at the Chapel Royal, Savoy, by special licence, Alastair Forbes Cowan, M.B., Ch.B. Edin., to Edyth Isabel, younger daughter of Mr. and Mrs. W. R. Davis, The Poplars, Enfield.

DEATHS.

EDGELOW.—On Nov. 20th, at Evelyn-gardens, after a short illness, George Edgelow, M.D., in his 76th year.

BENT.—On Nov. 18th, at Crossley House, Chiswick, J. G. F. Bent, M.D. Edin.

HOLLAND.—On Nov. 15th, Henry Frederick Holland, M.D., J.P., of Charterhouse-road, Godalming.

KEELE.—On Nov. 20th, suddenly, at Southampton, John Rushworth Keele, O.B.E., M.R.C.S., L.R.C.P.

MACLEOD.—On Nov. 16th, at Murtle, Aberdeenshire, Clement R. Macleod, M.C., M.B., D.P.H. Camb., late Captain, R.A.M.C.

N.B.—A fee of 7s. 6d. is charged for the insertion of Notices of Births, Marriages, and Deaths.

SALARIES OF SCHOOL DENTISTS.—**At the last meeting of the Devon Education Committee the salaries of the school dental surgeons came under discussion. It was stated that the salaries of these gentlemen were less than those fixed by the Dental Association. After some discussion it was decided to give each officer an additional £50 per annum towards the travelling expenses and to allow the matter of increase of salaries to stand over for the present.**

Medical Diary.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

MEETINGS OF SECTIONS.

Tuesday, Nov. 30th.

SECTION OF TROPICAL MEDICINE: at 5 P.M.
To appoint Organising Committee to prepare nominations for the offices of President, Honorary Secretaries, and Council, and to draw up Regulations for the conduct of the Section.
Paper:
Dr. F. G. Rose: Incidence of Filariasis in British Guiana.
Demonstrations:
Dr. J. Gordon Thomson and Major J. A. Sinton, V.C., I.M.S.: Leishmania Donovani, in Cultures, Recovered from Spleen during Life and from the Bone Marrow of the Cadaver.
Major A. C. Perry, R.A.M.C. (Royal Army Medical College): Tumours of Gut Wall (due to Galoncus Perniciosus) showing Relation of Helminth Infection to Bacterial Invasion.
Dr. G. M. Vevers: Developmental Stages of Ankylostoma Ceylanicum.
Professor R. T. Leiper (London School of Tropical Medicine): On the Presence of an Inner Shell in the Egg of Oxyuris Vermicularis.
Dr. M. Khalil: On the Occurrence of the Eggs of Mites in the Fæces of Miners in Cornwall and their Subsequent Development on Culture Media.
Clinical Cases:
Dr. J. B. Christopherson: Practical Demonstration of the Technique of Intravenous Injection of Tartar Emetic in Bilharziasis.

Wednesday, Dec. 1st.

SECTION OF SURGERY: at 5.30 P.M.
Paper:
Sir Lenthal Cheatle: Cysts and Ducts in Relation to Cancer and Papillomata of the Breast (illustrated by lantern and microscopical slides).
An Exhibition of Rare and Interesting Tumours of the Breast, collected from the various hospital museums, will be on view at 4.30 P.M.

Thursday, Dec. 2nd.

SECTION OF OBSTETRICS AND GYNÆCOLOGY: at 8 P.M.
Short Communications:
Dr. Clifford White: Sodium Bicarbonate Tolerance in the Toxæmias of Pregnancy.
Major C. A. F. Hingston: The Necessity for the Reduction of Blood Pressure in Eclampsia.
Paper:
Dr. James Young and Dr. Douglas Miller: Further Observations on the Ætiology of Eclampsia and the Pre-eclamptic State.

Friday, Dec. 3rd.

SECTION OF LARYNGOLOGY: at 4.45 P.M. (Cases at 4 P.M.)
Cases will be shown by—
Dr. Douglas Guthrie, Mr. Archer Ryland, Mr. C. W. M. Hope, Dr. Frederick Spicer, Sir James Dundas-Grant, and others.

SECTION OF ANÆSTHETICS: at 8.30 P.M.
Informal Meeting for free discussion (tea, coffee, smoking).
N.B.—As this is the first of these evenings it is hoped that Members will endeavour to attend and, if possible, exhibit specimens or other objects of interest.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

WEST LONDON POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.
MONDAY, Nov. 29th.—2 P.M., Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Dr. G. Stewart: The Nervous Affections of Rheumatism.
TUESDAY.—2.30 P.M., Mr. Addison: Visit to Surgical Wards. 5 P.M., Lecture:—Mr. Banks Davis: Tuberculous Disease of Larynx, Middle Ear, &c.
WEDNESDAY.—10 A.M., Mr. MacDonald: Genito-Urinary Department. 5 P.M., Lecture:—Mr. D. Armour: Arthritis. (Lecture II.)
THURSDAY.—2 P.M., Mr. B. Harman: Eye Department. 5 P.M., Special Lecture:—Sir J. Dundas-Grant: Functional Aphonia and Allied Disorders (open to all medical practitioners).
FRIDAY.—12.15 P.M., Dr. Burnford: Applied Pathology. 5 P.M., Lecture:—Mr. Steadman: Dental Sepsis in its Relation to Rheumatism.
SATURDAY.—10 A.M., Dr. Arthur Saunders: Medical Diseases of Children. 2 P.M., Dr. Owen: Medical Out-patients.
Daily:—10 A.M., Ward Visits. 2 P.M., In-patient, Out-patient Clinics and Operations.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.
MONDAY, Nov. 29th.—2.30 P.M., Mr. J. B. Banister: Gynæcological. 3 P.M., Dr. A. J. Whiting: Cases of Heart Disease.
TUESDAY.—9.45 A.M., Lieut.-Col. R. H. Elliot and Mr. N. Fleming: Eye Cases and Operations. 2.30 P.M., Mr. C. H. Hayton: Throat, Nose, and Ear. 3 P.M., Mr. J. Howell Evans: Selected Surgical Cases.
WEDNESDAY.—2 P.M., Mr. C. H. Hayton: Throat Operations. 2.30 P.M., Dr. W. J. Oliver: Skin. 4.30 P.M., Mr. N. Fleming: Selected Eye Cases.
THURSDAY.—2 P.M., Mr. N. Fleming: Eye Out-patients. 3 P.M., Dr. J. Metcalfe: Examination of Diseases of Digestive Tract by X Rays.
FRIDAY.—2.30 P.M., Dr. C. E. Sundell: Children's Diseases. 4.30 P.M., Dr. J. B. Alexander: Selected Medical Cases.
SATURDAY.—3 P.M., Mr. H. W. Carson: Surgical In-patients.
Daily:—11 A.M., Mr. T. H. C. Benians: Bacteriological Department. 2 P.M., Operations, In-patient, Out-patient Clinics, &c.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, W.C. 1.
MEDICAL SCHOOL.
MONDAY, Nov. 29th.—2–3.30 P.M., Out-patient Clinic: Dr. Collier. 3.30 P.M., Dr. Aldren Turner: Ward Cases.
TUESDAY, Nov. 30th.—2–3.30 P.M., Out-patient Clinic: Dr. Grainger Stewart. 3.30 P.M., Dr. Risien Russell: Ward Cases.
WEDNESDAY, Dec. 1st.—2 P.M., Lecture. 3.15 P.M., Lecture.
THURSDAY, Dec. 2nd.—2–3.30 P.M., Out-patient Clinic: Dr. Farquhar Buzzard. 3.30 P.M., Lecture:—Dr. Greenfield: Cerebro-spinal Fluid.
FRIDAY, Dec. 3rd.—2–3.30 P.M., Out-patient Clinic: Dr. Gordon Holmes. 3.30 P.M., Dr. Collier: Ward Cases.
SATURDAY, Dec. 4th.—9 A.M., Surgical Operations.
Fee for Post-Graduate Course £7 7s. C. M. HINDS HOWELL, Dean.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.
THURSDAY, Dec 2nd.—4 P.M., Lecture:—Dr. Poynton: Rheumatic Heart Disease.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART, Westmoreland-street, W.
MONDAY, Nov. 29th.—5.30 P.M., Post-Graduate Lecture:—Dr. Parsons-Smith: Subacute Infective Endocarditis.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.
THURSDAY, Dec. 2nd.—6 P.M., Chesterfield Lecture:—Dr. W. Griffith: Common Forms of Dermatitis.

MANCHESTER ROYAL INFIRMARY POST-GRADUATE CLINIC.
TUESDAY, Nov. 30th.—4.30 P.M., Lecture:—Dr. A. Ramsbottom: Modern Treatment of Diabetes.

SALFORD ROYAL HOSPITAL AND ANCOATS HOSPITAL POST-GRADUATE DEMONSTRATIONS, at the two Hospitals alternately.
THURSDAY, Dec. 2nd.—4.30 P.M., Dr. H. Holmes: Demonstration Relative to Congenital and Rhythmic Disorders of the Heart. (At Ancoats Hospital.)

Communications, Letters, &c., to the Editor have been received from—

A.—Dr. J. G. Arbulú, Paris; Auxiliary Royal Army Medical Corps Funds, Lond., Sec. of.
B.—Dr. J. M. Bruce, Lond.; Dr. J. L. Brownlie, Glasgow; Dr. F. G. Bushnell, Plymouth; Sir J. Barr, Liverpool; Mr. H. H. Brown, Ipswich; Mr. J. A. Barth, Leipzig; Col. R. J. Blackham, Maidstone; British Dentists' Hospital, Lond.; Mr. G. Bethell, Lond.; Mr. W. R. Brain, Lond.; Dr. J. Brownlee, Lond.
C.—Dr. W. Calwell, Belfast; Messrs. Clement and Johnson, Lond.; Central Council for Infant and Child Welfare, Lond., Hon. Sec. of; Cardiff Medical Society; Dr. H. W. Crowe, Harrogate; Dr. C. W. Chapman, Lond.; Mr. H. Curtis, Lond.; Sir F. Colyer, Lond.; Child Study Society, Lond.; Mrs. A. E. Cockerill, Northam; Chelsea Hospital for Women, Lond.; Central Eastern London Post-Graduate College; Dr. C. Coombs, Bristol.
D.—Dr. J. F. Devane, Limerick; Mr. H. Dickinson, Lond.; Sir H. B. Donkin, Lond.; Dr. I. J. Davies, Cardiff.
E.—Dr. J. R. Earp, Geneva; Edinburgh Medical Missionary Society; Express Dairy Co., Lond.
F.—Dr. R. H. Fox, Lond.
G.—Dr. M. Greenwood, Lond.; Mr. J. W. Gardner, Lond.; Surg.-Commdr. D. H. C. Given, R.N.
H.—Dr. T. S. Higgins, Lond.; Surg.-Vice-Admiral Sir Robert Hill, Lond.; Hunterian Society, Lond.; Prof. F. G. Hopkins, Cambridge; Dr. R. E. V. Hale, Lond.; Dr. R. C. Holt, Didsbury.
I.—Insurance Committee for the County of Essex, Leytonstone, Clerk of; Industrial Fatigue Research Board, Lond.
J.—Col. S. P. James, I.M.S., Lond.
K.—Dr. R. Knox, Lond.; Dr. C. Kirk, Dundee; Mr. H. Kimpton, Lond.; Dr. A. E. Keown, Dowlais.
L.—Mr. F. L'Heureux, Worthing; Lebanon Hospital, Lond., Sec. of; Mr. J. P. Lockhart-Mummery, Lond.; Sir W. B. Leishman, Lond.; Prof. J. A. Lindsay, Belfast; London Telephone Service, Controller of.
M.—Medical Defence Union, Lond., Sec. of; Dr. J. P. Mordaunt, Erith; Dr. K. McNeill, Lond.; Mr. Murray, Lond.; Chartered Society of Massage and Medical Gymnastics, Glasgow; Dr. R. McKenna, Liverpool; Manchester Royal Infirmary; Dr. H. A. Macewen, Lond.; Dr. E. W. G. Masterman, Lond.; Medical Research Council, Lond.; Dr. R. Miller, Lond.; Ministry of Health, Lond.; Dr. A. Marmorek, Geneva; Dr. E. A. McAnnally, Sittingbourne.
N.—National Association for the Prevention of Tuberculosis, Lond., Hon. Sec. of; Norwich Medico-Chirurgical Society.
O.—Dr. J. H. Owen, Fishguard.
P.—Dr. A. G. Phear, Lond.; Mr. W. H. Pettifor, Lond.; Nurse E. N. Pringle, Edinburgh; Panel Committee for the County of London; Count de Penha Longa, Lond.; Dr. V. Pauchet, Paris; Prudential Insurance Co. of America, Newark.
R.—Royal Society of Arts, Lond.; Royal Society of Medicine, Lond., Asst. Editor of; Mr. J. M. Redding, Lond.; Mr. R. V. Stanford, Cardiff; Dr. J. D. Rolleston, Lond.; Sir H. D. Rolleston, Lond.; Royal Society, Lond.; Dr. R. P. Rowlands, Lond.; Dr. W. H. R. Rivers, Cambridge; Prof. S. Russ, Lond.
S.—Dr. A. D. Symonds, Bristol; St. Thomas's Hospital Medical School, Lond., Sec. of; Mr. J. D. Spencer, Aberystwyth; Mr. R. E. Smith, Barry; Prof. W. Stirling, Manchester.
T.—Sir N. Tirard, Lond.; Dr. G. L. Thornton, Exeter.
U.—United States Public Health Service, Washington; University College, Lond.; University College Hospital Medical Society, Lond.
V.—Dr. R. Vincent, Lond.
W.—Dr. R. McN. Wilson, Lond.; Dr. J. D. Wynne, Norwich; West London Post-Graduate College; Dr. C. H. Warner, Nottingham; Dr. R. L. M. Wallis, Lond.; Dr. J. E. W. Wallin, St. Louis; Mr. A. J. Walton, Lond.; Dr. C. H. Whiteford, Plymouth.

Communications relating to the editorial business should be addressed exclusively to the Editor of THE LANCET, 423, Strand, London, W.C. 2.

Notes, Short Comments, and Answers to Correspondents.

MEDICAL AFFAIRS IN ASSAM.[1]

IN the province of Assam the rainfall in 1919 was below the normal amount in each month from January to August inclusive. The defect was as much as 68 per cent. in February and 77 per cent. in March; it was 39 per cent. in excess in September, and well above the average in November and December. The very considerable deficiency in the first eight months of the year led to increase in the price of food, especially rice; and this, together with a susceptibility to disease due to the influenza prevalence of the previous year, appears to have caused the exceptional unhealthiness of the year now under review. The total population, on which the ratios are based, is stated as 6,051,507, according to the Census of 1911, but owing to immigration there has, no doubt, been an increase, which, however, cannot be definitely stated. With this qualification the birth-ratio is taken as 30·52 per 1000 (compared with 34·98 in 1918, and 32·29 in 1913–17). Other provinces, however, show considerably greater decrease, notably Bengal (27·5, compared with 32·9 in 1918, and 33·4 in 1913–17), Bihar and Orissa (30·46, compared with 37.51 and 40·40), and Madras (25·52, compared with 28·89 and 32·4). The death-rate was 50·09 (compared with 46·10 in 1918 and 27·77 in 1913–17); this shows an enormous increase, and is considerably higher than the ratio in any other province in India, the Central Provinces coming next (43·24), and the United Provinces (41·69), third. It "appears to have been primarily due to the continuance of the influenza epidemic during the first quarter of the year, and, secondarily, to an exaggeration of the normal seasonal cycles of morbidity among a population whose bodily resistance had been reduced by epidemic disease, and whose environment was economically and meteorologically somewhat unfavourable." In every district the death-rate exceeded the quinquennial average; in Darrang the ratio was 60·74, and in four other districts it was over 50 per 1000. More than half the deaths were returned under the head of fevers (25·52 per 1000). Major T. C. McCombie Young, I.M.S., the Sanitary Commissioner, considers that a very large proportion of these were due to influenza. Cholera caused 33,980 deaths (5·61 per 1000 compared with 2·45, the average ratio of the preceding quinquennium); two-thirds of this mortality occurred in the four months March to June inclusive, and the district chiefly affected was Sylhet (14,729 deaths, or 5·98 per 1000). Small-pox caused 1432 deaths (0·23 per 1000); in the decennium, 1908–18, the death-rate from this cause had averaged 0·50 per 1000. Major Young remarks that in the "survey of the death-rates for 1919, the comparatively low death-rate from small-pox forms one of the few bright spots in a gloomy view." In three districts, indeed, the death-ratio was less than 0·1 per 1000. Kala-azar has prevailed in Assam for many years; in 1918 there had been 2003 fatal cases; in 1919 there were 1667, of which 1293 occurred in the three districts of Sylhet, Kamrup, and Nowgong. Segregation and removal from an infected site have been found to be successful in controlling local outbreaks in villages, when the removal is carried out over a sufficiently large area; intravenous injection of tartar emetic has been employed with very good results. Quinine has been distributed through postmasters, schoolmasters, and other agencies to the number of 20,519 "treatment packets," this being an increase of 3639 over the previous year, which is most satisfactory.

In the Assam jails, with a daily average population of 2354, the admissions to hospital in 1919 amounted to 959·58 per 1000, a very high ratio, but less than that of the previous year, when it was 1118 per 1000. The death-rate was 24·21 per 1000, higher than in any year since 1914; 17 out of the 57 deaths were from influenza. It is noteworthy that 48 per cent. were in indifferent health, and 14 per cent. in actually bad health on admission to jail. Also that 66·6 per cent. were suffering from pyorrhœa, and 45 per cent. from hookworm on admission.

King Edward VII. Memorial Pasteur Institute.[2]

A large amount of most valuable work has been carried out at the King Edward VII. Memorial Pasteur Institute at Shillong in 1919. For antirabic treatment alone 1408 patients were received. Of these 1336 were Indians (mostly from Bengal and Assam), with 15 deaths (1·12 per cent.); 72 were Europeans, with no fatal case. During the three years 1917–19 there have been 3045 cases treated, with 33 deaths (1·08 per cent.); for 2833 Indians the death-rate was 1·16 per cent.; among 212 Europeans there was not a single death. With reference to kala-azar, Captain R. Knowles, I.M.S., temporary director of the Institute, states that "there can now be not the slightest doubt as to the success and extreme popularity of the treatment by intravenous injections of tartar emetic ..... whereas five years ago 90 per cent. or more of all cases in Assam died, there is now the possibility of cure in some 75 per cent." The treatment course consists of 200 cg. of tartar emetic given intravenously in 1 per cent. solution during a period of two and a half to three months. There was a severe outbreak of Naga sore (or Cachar boil) in Assam during the monsoon of 1919, "the etiology of which is one of the most interesting medical problems of Assam." Dr. Hall Wright has proved (1919) the possibility of transmission by a small non-biting fly (*Siphonella*), by feeding these flies on a case and then transferring them to an abrasion on his own arm, a typical Naga sore resulting. Man alone seems to be susceptible. "In every respect the fusiform bacillus of Naga sore appears to be identical with the fusiform bacillus of what is best termed 'Vincent's disease' [Vincent's angina], since it affects mucous membranes other than that of the throat alone." The wearing of puttees during the rainy season is recommended. Malaria has been prevalent and must be considered as endemic at Shillong; parasites in blood films were found in an English child, aged 4, who had never been out of the station. Almost every member of the institute suffered repeatedly in 1919. A vaccine section was organised during the latter half of the year, principally to meet the demand for mixed catarrhal vaccine for influenza (P.I.P.), another for enteric (T.A.B.), and another for cholera. Among 1533 influenza cases not inoculated the case mortality was 12·6 per cent.; among 2427 cases inoculated after onset of the disease it was 9·2 per cent. Captain Knowles points out that its chief use is to diminish secondary complications.

[1] Annual Sanitary Report of the Province of Assam for 1919. Shillong. 1920. [2] Third Annual Report, 1919. Shillong. May, 1920.

SCIENTIFIC BOOKS FOR CENTRAL EUROPE.

THE Anglo-American University Library for Central Europe has got to work, and several consignments of literature have already been dispatched to Berlin, Budapest, Frankfurt, Göttingen, Graz, Innsbruck, Munich, Prague, and Vienna, where, owing to the unfavourable rate of exchange and the high cost of living, the prices of recent English and American books on philosophy and science have made it impossible for the universities to keep in touch with English and American thought. The scheme when complete will establish in Central Europe under British-American auspices libraries of recent books in English which will be indispensable to university teachers. These libraries will then supply on loan, as gifts or by exchange, books, periodicals, reprints of articles in scientific periodicals, and other literature needed by the faculties of the different universities in Central Europe.

Professor Skillings, who recently spent a period on the continent as the representative of the Anglo-American University Library for Central Europe, visited most of the university centres, and talked with about 75 university professors and a number of students. Everywhere the idea was cordially and gratefully welcomed. Leaflets have been prepared in Berlin and Vienna embodying the ideas of the library, signed by 53 university teachers in Germany and 35 in Austria. Hamburg, Kiel, Erlangen, and Breslau have offered to provide centres for the libraries. It is quite evident from letters received that the universities and scientific institutions in Central Europe urgently desire to resume the exchange relations with foreign learned societies which they enjoyed before the war, while they are diffident about approaching these societies directly. Offers of coöperation and support have been received from America, where a complete list of names is being prepared by the Institute of International Education, New York, which has undertaken to act as the centre for American effort. A committee in New York, presided over by Professor Franz Boas, has undertaken to purchase for university libraries on the continent such sets of periodicals as are missing owing to the war, and to guarantee the expenses of transportation of current literature.

Lists of books and periodicals required in Central Europe have been received, and the way is now clear for the actual commencement of the real business of the library. The present need is for contributions of literature and a substantial sum of money for obtaining books not otherwise procurable, and for the payment of the small administrative expenses. Books and periodicals in English, published since 1914, will be accepted as loans or gifts, or they may be made subject to an exchange of literature from Central Europe. From those not in a position to contribute large sums of money spare books from their own collections, copies of their works written and published since 1914, or reprints of articles will be welcomed. Donations of literature should be addressed to the honorary secretary, Mr. B. M. Headicar, London School of Economics, Clare Market, London, W.C.2., and money orders may be made payable to the "Anglo-American University Library," and sent to Lieutenant-Colonel George Schuster at the same address.

RAT DESTRUCTION IN SUSSEX.

THE West Sussex County Council took up this matter with great enthusiasm a few months ago, and the campaign against the rodent organised by a body of rat-catchers has resulted in the wholesale destruction of this pest. The following figures, the first to be tabulated under the scheme, were presented to the meeting of the county council on Nov. 12th by the rat organising officer:—

Premises visited and re-visited	5125	Rats poisoned (assumed dead) on 5 p.c. basis of Ministry of Agriculture	96,480
Premises with rats	1033	Number of premises where official rat-catchers have been employed...	615
Rats killed	6350		
Rats poisoned, picked up...	4824		

Such figures show, at least, the necessity of waging war against the rat, and it may be hoped that similar results are being attained in other places.

THE EDINBURGH MISSIONARY MEDICAL SOCIETY.

Dr. John Abercrombie was the first president of this society more than 80 years ago. Besides giving financial aid to medical candidates for mission service, the society carries on medical and evangelical work in the Cowgate Dispensary, where scope is afforded. Well-equipped hospitals are maintained at Nazareth and Damascus, and qualified physicians and surgeons are sent to all the mission fields throughout the world. An urgent appeal for support, directed especially to old Edinburgh men, regrets the present lack of doctors for this work, at least 80 men and women being required to fill vacancies that have occurred during and since the war. The high cost of living at home and abroad has led to a serious financial position demanding either limitation of the work of the society or a large additional income. Information will be given by the secretary, Dr. H. F. Lechmere Taylor, 56, George-square, Edinburgh.

ENTOMOLOGY IN A PUBLIC HEALTH PROSECUTION.

A FEW weeks back (see THE LANCET, Oct. 2nd, p. 728) the Supreme Judicial Court of Maine upheld the justice of a claim in which a breach of contract was justified by a fly nuisance, and public health literature on the fly was freely used in court. It must be still more seldom that actual specimens of the seven stages in the development of a fly from the larva to the fully-grown adult are produced in courts, but this was the case recently at Manchester police court, where a prosecutor representing the medical officer of health, Dr. J. Niven, appeared against a defendant who had stables in Greenheys, a populous district, and was summoned for failing to remove a large quantity of horse manure at the stables during a period of eight days. An inspector of the health department found specimens of the whole of the "seven stages" of the fly upon the manure, indicating that the heap had been in existence for more than seven days. The prosecutor stated that action was taken by the health authorities because it is an undisputed fact that summer diarrhœa is most prevalent when the season for house flies is at its height. A fine of 40s. was imposed.

THE UNIVERSITIES BUREAU AND ITS YEAR BOOK.

AT the first Congress of Universities of the British Empire, held in London in 1912, all the 53 universities were represented, in most cases by their executive heads, together with several members of their professoriate. The Universities Bureau of the British Empire was an outcome of this Congress, and to it was entrusted the summoning of future congresses at intervals of five years. In 1917 this intention was frustrated by the war. Transport difficulties rendered it undesirable to attempt to carry it into effect during the present year, and it has now been arranged that the second Congress shall be held in the summer of 1921. Dr. Alex Hill, F.R.C.S., took over the organisation of the first Congress after the death of Dr. R. D. Roberts, who had laid its foundations, has acted as secretary to the Bureau since its institution, and is now engaged in the promotion of the second Congress. The number of universities in the Empire has increased to 58, and all, it is anticipated, will send delegates. The University of Oxford has invited the members of the Congress to be its guests from July 5th to 8th. The Chancellor of the University, Lord Curzon, will preside over the morning session on July 5th, and Mr. A. J. Balfour, Chancellor of the University of Cambridge, will preside in the afternoon. On the preceding day the Congress will assemble in London for certain ceremonial functions and entertainments.

To the scope of this Congress the "Year Book of the Universities of the Empire" (1918–1920) will serve as a useful and trustworthy guide. This year book (London: G. Bell and Sons, Ltd. 1920. Pp. 503. Price 15s.), edited by Mr. W. H. Dawson and published for the Universities Bureau, appeared first in 1914 and two further editions were issued during the war until, owing to the absence of men students and teachers on military service, it was felt that no useful purpose would be served by its continued publication. The preparation of the present edition has proved an arduous undertaking as the changes in staff have been very numerous. In an appendix is given a valuable summary of the war work, other than combatant, undertaken by the universities. The summary of regulations governing admission to the various professions and occupations is omitted from this edition, but with promise of appearance in the next. We may add that the volume is handy and attractive, and loses nothing from the economy in paper which has greatly diminished its previous size.

A FREELY VENTILATED CAP.

WE have received from Mr. Nathan Marks, hat and cap manufacturer, of Exchange-street, Cheetham, Manchester, a sample of the "Airoduct cap," in which there is a system of free ventilation of air between the lining and the head. It is a cool and comfortable cap to wear.

EAST SUSSEX COUNTY COUNCIL:

CINEMA PROPOSAL FOR MENTAL HOSPITAL NEGATIVED.

THE provision of the mental hospital under the jurisdiction of the East Sussex County Council with a cinema, as suggested by the hospital's visiting committee, was discussed on Nov. 16th and was negatived. The cost would have been £250, and the council agreed that it must confine itself to the provision of necessities. The council's sanatorium scheme at Darvell Hall, Robertsbridge, has been seriously hindered by the industrial situation and it is not now expected to be ready for the reception of tuberculous patients until Feb. 1st. The recommendation of a committee that a lady school doctor be appointed to devote her whole time to the medical inspection of school children was rejected. The county coroner applied for a proportionate increase of salary, or a special temporary allowance, to bring his actual remuneration to something like a pre-war level; and the council voted a bonus at the rate of 50 per cent. of his salary as from Oct. 1st.

WINE *v.* WHISKY.

To the Editor of THE LANCET.

SIR,—The question as to the relative value of these two forms of stimulant from a medicinal and dietetic point of view, referred to in the last page of THE LANCET for Nov. 13th, is one which demands more than passing comment. In my opinion the substitution of whisky for wine is largely due to booming of the uric acid theory by advertisers of anti-uric acid remedies. The frequency with which patients attribute their symptoms to uric acid shows what an obsession the idea has become. I have had many patients who, in the belief that an enlarged and inflamed great toe-joint was due to gout, had taken large quantities of these drugs without benefit. Examination negatived the idea of gout, while the toe trouble was clearly due to the pressure of tight boots.

On inquiring into the habits of these "acid" patients as regards stimulants, they reply, with an air of virtue, that they never take fermented liquors and only drink whisky. I am further told that one glass of red wine will provoke an attack of gout, which is absurd. Several years since I consulted the late Dr. Oliver, of Harrogate, for sciatica. In the course of the interview I told him I habitually took three glasses of claret daily, and his advice was to go on with it. With many people not only is whisky looked upon as harmless in gout and rheumatism, but also beneficial. Both assumptions are fallacious. I cannot recall a single case of either of these diseases which became worse for cutting off the whisky; on the contrary, the rule was such patients improved in every way.

In heart failure a dose of brandy or whisky may enable the patient to tide over impending death, but to prescribe a certain amount of alcoholic stimulant at regular intervals simply because a heart lesion has been discovered is unjustifiable. To give a stimulant when the crippled heart is successful in its efforts to maintain the circulation is most mischievous. It is like goading a lame horse when, if left to himself and given sufficient time, he would get through his job. It should be clearly understood that shortness of breath on moderate exertion is nature's indication for rest, not for the whip, which leads to further strain on the already depleted reserve of energy. Such patients need rest and medical treatment. In cardiac cases and in arterio-sclerosis it is of cardinal importance that the digestive organs should be spared every possible source of irritation, which is less likely to occur with light wine than with spirit.

In the aged and infirm generous wine is preferable to whisky. There is some truth in the saw that port wine is the milk of old age.

I am, Sir, yours faithfully,

Harley-street, W., Nov. 19th, 1920. CHARLES W. CHAPMAN.